CAR / TRUCK

Light-Medium-Heavy

1987 SHOP MANUAL

PRE-DELIVERY

IMPORTANT SAFETY NOTICE

Appropriate service methods and proper repair procedures are essential for the safe, reliable operation of all motor vehicles as well as the personal safety of the individual doing the work. This Shop Manual provides general directions for accomplishing service and repair work with tested, effective techniques. Following them will help assure reliability.

There are numerous variations in procedures, techniques, tools, and parts for servicing vehicles, as well as in the skill of the individual doing the work. This Manual cannot possibly anticipate all such variations and provide advice or cautions as to each. Accordingly, anyone who departs from the instructions provided in this Manual must first establish that he compromises neither his personal safety nor the vehicle integrity by his choice of methods, tools or parts.

NOTES, CAUTIONS, AND WARNINGS

As you read through the procedures, you will come across NOTES, CAUTIONS, and WARNINGS. Each one is there for a specific purpose. NOTES give you added information that will help you to complete a particular procedure. CAUTIONS are given to prevent you from making an error that could damage the vehicle. WARNINGS remind you to be especially careful in those areas where carelessness can cause personal injury. The following list contains some general WARNINGS that you should follow when you work on a vehicle.

- Always wear safety glasses for eye protection.
- Use safety stands whenever a procedure requires you to be under the vehicle.
- Be sure that the ignition switch is always in the OFF position, unless otherwise required by the procedure.
- Set the parking brake when working on the vehicle. If you have an automatic transmission, set it in PARK unless instructed otherwise for a specific operation If you have a manual transmission, it should be in REVERSE (engine OFF) or NEUTRAL (engine ON) unless instructed otherwise for a specific operation. Place wood blocks (4″ x 4″ or larger) to the front and rear surfaces of the tires to provide further restraint from inadvertent vehicle movement.
- Operate the engine only in a well-ventilated area to avoid the danger of carbon monoxide.
- Keep yourself and your clothing away from moving parts, when the engine is running, especially the fan and belts.
- To prevent serious burns, avoid contact with hot metal parts such as the radiator, exhaust manifold, tail pipe, catalytic converter and muffler.
- Do not smoke while working on the vehicle.
- To avoid injury, always remove rings, watches, loose hanging jewelry, and loose clothing before beginning to work on a vehicle. Tie long hair securely behind the head.
- Keep hands and other objects clear of the radiator fan blades. Electric cooling fans can start to operate at any time by an increase in underhood temperatures, even though the ignition is in the OFF position. Therefore, care should be taken to ensure that the electric cooling fan is completely disconnected when working under the hood.

foreword . . .

This 1987 Shop Manual has been prepared to provide information covering Vehicle Identification, Pre-Delivery and Hoisting and Jacking information and procedures for 1987 Ford Cars and Trucks.

Body, Chassis, Electrical, and Engine service repairs are covered in the appropriate 1987 Car or Truck Shop Manuals for the particular vehicle being serviced.

For easy reference, information in this manual has been divided into smaller Sections. The Sections relating to Ford Cars are in the front half of this Manual. The Sections relating to Ford Trucks are in the back half of this Manual. In most cases, specifications are included at the end of each Section.

To aid in locating specific items in this manual, use the Alphabetical Subject index in the back of the manual or the Group and Section index on the following page. The tab locator on the right side of this Group and Section Index will help you find the first page of each Group.

The first page of each Section contains an index to locate service operations covered in that Section. The Group-Section breakdown is also indicated in the page number located at the top of each page.

Example: 50-02-21 = (Group) 50 — (Section) 02 — (Page) 21

The descriptions, testing procedures, and specifications in this manual were in effect at the time the manual was approved for printing. Ford Motor Company reserves the right to discontinue models at any time, or change specifications, design or testing procedures without notice and without incurring obligation. Any reference to brand names in this manual is intended merely as an example of the types of tools, lubricants, materials, etc. recommended for use. Equivalents if available may be used. The right is reserved to make changes at any time without notice.

Ford Parts and Service Division
Training and Publications Department
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Cross Index

Manual	Content	Vehicle Lines
A	Body, Chassis, Electrical	Bronco, Econoline (E-150 through E-350) and F-150 through F-350
B	Engine	Bronco, Econoline (E-150 through E-350) and F-150 through F-350
C	Pre-Delivery, Hoisting and Jacking	All Truck Series
D	Body, Chassis, Electrical	F-, FT-, B-, C-600 through 8000 Series
E	Engine	F-, FT-, B-, C-600 through 8000 Series
H	Engine/Emissions Diagnosis	All Car Models and Truck Series

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IDENTIFICATION CODES

GROUP 10

SECTION 10-01 Vehicle Identification

SUBJECT PAGE

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  Vehicle Certification Label 10-01-1
IDENTIFICATION CODES 10-01-3
VEHICLE APPLICATION 10-01-1

VEHICLE APPLICATION

All vehicles.

DESCRIPTION

Official Vehicle Identification Number

The official Vehicle Identification Number (VIN) (Fig. 1) for title and registration purposes is stamped on a metal tab that is fastened to the instrument panel close to the windshield on the driver's side of the vehicle and is visible from outside.

Vehicle Certification Label

The Vehicle Certification Label (V.C. Label) (Fig. 1) is affixed on the LH front door lock panel or door pillar. The upper half of the label contains the name of manufacturer, month and year of manufacture, Gross Vehicle Weight Rating (GVWR), Gross Axle Weight Rating (GAWR), and the certification statement.

The V.C. label also contains a 17 character Vehicle Identification Number. This number is used for warranty identification of the vehicle, and indicates: manufacturer, type of restraint system, line, series, body type, engine, model year and consecutive unit number (Fig. 1).

The last six digits of the Vehicle Identification Number indicate the Consecutive Unit Number of each unit built at each assembly plant. The Consecutive Unit Numbers begin as follows:

100 001 thru 600 000: Ford Division Vehicles.

600 001 thru 999 999: Lincoln/Mercury Division Vehicles.

The remaining information on the V.C. Label consists of the following vehicle identification codes: color and body type, vinyl roof, moulding, and interior trim. Additional codes indicate vehicles equipped with air conditioning, radio type, sun roof type (if any), as well as axle, transmission, spring, district and special order codes.

The following charts provide various codes and their respective identification.

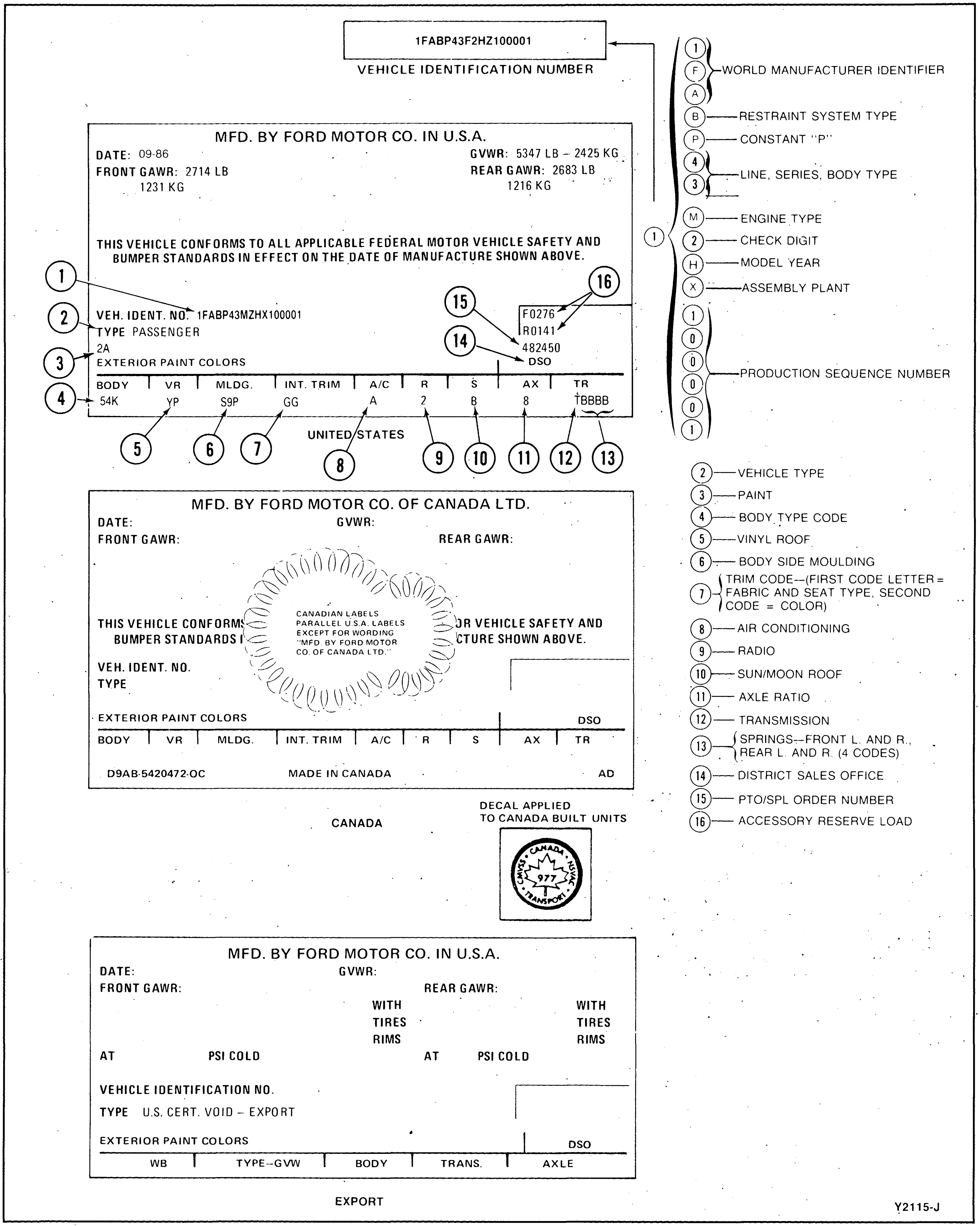
1FABP43F2HZ100001
VEHICLE IDENTIFICATION NUMBER
1 F A — WORLD MANUFACTURER IDENTIFIER
B — RESTRAINT SYSTEM TYPE
P — CONSTANT "P"
4 3 — LINE, SERIES, BODY TYPE
M — ENGINE TYPE
2 — CHECK DIGIT
H — MODEL YEAR
X — ASSEMBLY PLANT
1 0 0 0 0 1 — PRODUCTION SEQUENCE NUMBER
MFD. BY FORD MOTOR CO. IN U.S.A.
DATE: 09-86
GVWR: 5347 LB – 2425 KG
FRONT GAWR: 2714 LB 1231 KG
REAR GAWR: 2683 LB 1216 KG
THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY AND BUMPER STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.
VEH. IDENT. NO. 1FABP43MZHX100001
TYPE PASSENGER
2A
EXTERIOR PAINT COLORS
F0276
R0141
482450
DSO
BODY VR MLDG. INT. TRIM A/C R S AX TR
54K YP S9P GG A 2 B 8 TBBBB
UNITED STATES
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
MFD. BY FORD MOTOR CO. OF CANADA LTD.
DATE:
GVWR:
FRONT GAWR:
REAR GAWR:
THIS VEHICLE CONFORMS … OR VEHICLE SAFETY AND
BUMPER STANDARDS I… CTURE SHOWN ABOVE.
CANADIAN LABELS PARALLEL U.S.A. LABELS EXCEPT FOR WORDING "MFD. BY FORD MOTOR CO. OF CANADA LTD."
VEH. IDENT. NO.
TYPE
EXTERIOR PAINT COLORS
DSO
BODY VR MLDG. INT. TRIM A/C R S AX TR
D9AB-5420472-OC
MADE IN CANADA
AD
CANADA
DECAL APPLIED TO CANADA BUILT UNITS
CANADA
CMVSS
NSVAC
977
TRANSPORT
MFD. BY FORD MOTOR CO. IN U.S.A.
DATE:
GVWR:
FRONT GAWR:
REAR GAWR:
WITH TIRES RIMS
WITH TIRES RIMS
AT PSI COLD
AT PSI COLD
VEHICLE IDENTIFICATION NO.
TYPE U.S. CERT. VOID – EXPORT
EXTERIOR PAINT COLORS
DSO
WB TYPE–GVW BODY TRANS. AXLE
EXPORT
2 — VEHICLE TYPE
3 — PAINT
4 — BODY TYPE CODE
5 — VINYL ROOF
6 — BODY SIDE MOULDING
7 — TRIM CODE—(FIRST CODE LETTER = FABRIC AND SEAT TYPE, SECOND CODE = COLOR)
8 — AIR CONDITIONING
9 — RADIO
10 — SUN/MOON ROOF
11 — AXLE RATIO
12 — TRANSMISSION
13 — SPRINGS—FRONT L. AND R., REAR L. AND R. (4 CODES)
14 — DISTRICT SALES OFFICE
15 — PTO/SPL ORDER NUMBER
16 — ACCESSORY RESERVE LOAD
Y2115-J

FIG. 1 Vehicle Identification and Certification Labels

IDENTIFICATION CODES

WORLD MANUFACTURER IDENTIFIER
(VIN POSITIONS 1, 2 AND 3)
1FA BP43M2HX100001

Code	Manufacturer	Make	Type
1FA	Ford Motor Company, USA	Ford	Passenger Car
1ME	Ford Motor Company, USA	Mercury	Passenger Car
1LN	Ford Motor Company, USA	Lincoln	Passenger Car
1MR	Ford Motor Company, USA	Continental	Passenger Car
1FD	Ford Motor Company, USA	Ford	Incomplete Vehicle
1MH	Ford Motor Company, USA	Mercury	Incomplete Vehicle
2FA	Ford Motor Company, of Canada, Ltd.	Ford	Passenger Car
2ME	Ford Motor Company of Canada, Ltd.	Mercury	Passenger Car
2FD	Ford Motor Company of Canada, Ltd.	Ford	Incomplete Vehicle
2MH	Ford Motor Company of Canada, Ltd.	Mercury	Incomplete Vehicle
1FF	Ford Motor Company, USA	Ford	Motor Vehicle Equipment Without Engine/Powertrain (Glider)
2FF	Ford Motor Company of Canada, Ltd.	Ford	Motor Vehicle Equipment Without Engine/Powertrain (Glider)

CY2202-G

VIN CHECK DIGIT FOR ALL VEHICLES
(VIN POSITION 9)

1FABP43M 2 HX100001

CY2207-F

PRODUCTION SEQUENCE NUMBER
(VIN POSITIONS 12 THROUGH 17)

1FABP43M2HX 100001

Sequence Number
100,001 through 600,000 — Ford Division Vehicles
600,001 through 999,999 — Lincoln/Mercury Division Vehicles

CY2210-G

VIN POSITIONS

1FAB P 43M2HX100001

Constant — P (Passenger Car Only)

CY2204-F

ENGINE TYPE — DISPLACEMENT, CYLINDERS FUEL TYPE, AND MANUFACTURER

(VIN POSITION 8)

1FABP18 R 2FZ100001

VIN Code	Displacement		Cylinders	Fuel	Manufacturer
	Liter	CID			
9	1.9 2V	116	4	Gasoline	Ford
J	1.9 EFI	116	4	Gasoline	Ford
H	2.0 D	122	4	Diesel	Toyo Kogyo
A	2.3 1V OHC	140	4	Gasoline	Ford
T	2.3 EFI Turbo	140	4	Gasoline	Ford
W	2.3 EFI Turbo	140	4	Gasoline	Ford
R	2.3 HSC	140	4	Gasoline	Ford
X	2.3 CFI	140	4	Gasoline	Ford
D	2.5 HSC-CFI	153	4	Gasoline	Ford
U	3.0 EFI	182	6	Gasoline	Ford
3	3.8	232	6	Gasoline	Ford
F	5.0	302	8	Gasoline	Ford
M	5.0 HO	302	8	Gasoline	Ford
G	5.8	351	8	Gasoline	Ford

CY2557-C

TRANSMISSION

F0276
R0141
482450
DSO

2A
EXTERIOR PAINT COLORS

BODY	VR	MLDG.	INT. TRIM	A/C	R	S	AX	TR
54K	YB	84A	GB	A	2	B	8	T BBBB

Code	Manual
9	4-Speed MTX
D	5-Speed MTX
2	5-Speed T50D
	Automatic
B	ATX (Batavia)
C	XP (C-5)
K	Toyo Kogyo
L	A4LD
T	Automatic Overdrive (AOD)

CY2558-D

☐

SPECIAL ORDER

F0276
R0141
482450
DSO

2A
EXTERIOR PAINT COLORS

BODY	VR	MLDG.	INT. TRIM	A/C	R	S	AX	TR
54K	YB	84A	GB	A	2	B	8	TBBBB

IF UNIT IS BUILT ON A D.S.O., F.S.O., P.T.O. (SPECIAL ORDERS), THE COMPLETE ORDER NUMBER IS TO APPEAR AFTER THE DISTRICT CODE.

CY2224-D

VEHICLE MODEL YEAR FOR ALL VEHICLES (VIN POSITION 10)

1FABP43M2 H X100001

VIN Code	Year
C	1982
D	1983
E	1984
F	1985
G	1986
H	1987

CY2208-G

AXLE RATIO

F0276
R0141
482450
DSO

☐ 2A
EXTERIOR PAINT COLORS

BODY	VR	MLDG.	INT. TRIM	A/C	R	S	AX	TR
54K	YB	84A	GB	A	2	B	8	TBBBB

ASSEMBLY PLANT
(VIN POSITION 11)

1FABP43MZH X 100001

VIN Code	
A	Atlanta
B	Oakville
F	Dearborn
G	Chicago
H	Lorain
K	Kansas City
T	Edison
W	Wayne
X	St. Thomas
Y	Wixom

CY2209-G

Code	Transaxle Ratio
0	3.07
2	3.23
3	3.33
6	3.26
7	3.73
8	2.85
9	3.09
C	3.37
G	3.77
H	3.52
Z	3.19

Code		
Conventional	Lock	Rear Axle Ratio
8	M	2.73
Y	Z	3.08
F	R	3.45
5	E	3.27
6	W	3.73
—	K	3.55

CY2559-D

DISTRICT CODES

F0276
R0141
482450
DSO

2A
EXTERIOR PAINT COLORS

BODY	YR	MLDG.	INT. TRIM	A/C	R	S	AX	TR
66K	YD	68D	DD	A	2	B	8	TBBBB

The D.S.O. Space will Show a Two Digit Code Number of the District Sales Office Which Ordered the Unit. This Code will Appear on all Units, Domestic — Special Order — Export — Etc.

Ford Division				L-M Division	
Code	**District**	**Code**	**District**	**Code**	**District**
00	Special	52	Dallas	00	Special
11	Boston	53	Kansas City	11	Boston
12	Buffalo	54	Omaha	15	New York
14	Pittsburgh	55	St. Louis	16	Philadelphia
15	New York	57	Houston	17	Washington
16	Philadelphia	58	Twin Cities		
17	Washington			21	Atlanta
		71	Los Angeles	22	Dallas
21	Atlanta	72	San Jose	23	Jacksonville
22	Charlotte	73	Salt Lake City	26	Memphis
23	Memphis	74	Seattle		
24	Jacksonville	75	Phoenix	32	Cincinnati
25	Richmond	76	Denver	33	Cleveland
26	New Orleans			34	Detroit
28	Louisville	83	Government		
		84	Home Office Reserve	41	Chicago
41	Chicago	85	American Red Cross	42	St. Louis
42	Cleveland	86	Recreational Vehicle Pool		
43	Milwaukee	87	Body Company	51	Denver
46	Indianapolis	89	Transportation Services	52	Los Angeles
47	Cincinnati			53	Oakland
48	Detroit	90's	Export	83	Government
				84	Home Office Reserve
				85	American Red Cross
				90's	Export

Ford Of Canada							
Code	**Mercury Regions**	**Code**	**Mercury Regions**	**Code**	**Ford Regions**	**Code**	**Ford Regions**
A1	Central	A6	Western	B1	Central	B6	Western
A2	Eastern	A7	Pacific	B2	Eastern	B7	Pacific
A3	Atlantic	A8	Great Lakes	B3	Atlantic	B8	Great Lakes
A4	Midwestern	I1	Export	B4	Midwestern	I1	Export

CY2223-D

		Fuel Metering				Transmission							Axle				
						Manual		Automatic									
VEHICLE	ENGINE	1949①	7200 (VV)	Electronic Fuel Injection	Mechanical Fuel Injection	T5OD	MTX	AOD	AXOD	A4LD	C-5	ATX	Integral (7.5)	Traction-Lok (7.5)	Integral (8.8)	Traction-Lok (8.8)	Transaxle
Escort/Lynx, EXP	1.9L CFI			●			●					●					●
	1.9L HO EFI			●			●					●					●
	2.0L Diesel③				●		●										●
Tempo/Topaz	2.3L & CFI			●			●					●					●
	2.3L CFI			●			●					●					●
	2.3L HSC 2V	●					●					●					●
	2.0L Diesel				●		●										●
Taurus/Sable	2.5L HSC CFI			●			●					●					●
	3.0L EFI			●					●								●
Mustang	2.3L EFI									●			●	●			
	5.0L HO SEFI					●										●	
	5.0L HO & SEFI			●						●						●	
Thunderbird/Cougar	2.3L Turbo			●		●				●			●	●			
	3.8L CFI			●				●			●		●	●			
	5.0L SEFI			●				●					●	●			
Mark VII/Continental	5.0L HO & SEFI			●				●							●	●	
	5.0L SEFI			●				●					●		●	●	
Ford Crown Victoria/Mercury Grand Marquis	5.0L SEFI		●	●				●							●	●	
	5.8L VV HO ①②		●					●							●	●	
Lincoln Town Car	5.0L SEFI			●				●							●	●	

① Canada Only
② Police
③ Not Available on EXP.

CY2544-B

GROUP 50
PRE-DELIVERY

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VEHICLE APPLICATION 50-02-1

VEHICLE APPLICATION

All Vehicles.

PRE-DELIVERY SERVICES

NON-LUXURY CARS

UNDERHOOD OPERATIONS

- CHECK EMISSION CONTROL SYSTEM FOR LOOSE, MISSING OR DAMAGED COMPONENTS. ALSO CHECK FOR AND CORRECT LOOSE OR DISCONNECTED ELECTRICAL AND VACUUM CONNECTIONS.
- CHECK AND TOP-UP ALL FLUIDS TO SPECIFIED LEVELS — ENGINE OIL, BRAKE MASTER CYLINDER, WINDSHIELD AND REAR WINDOW WASHER RESERVOIRS, AUTOMATIC TRANSMISSION, POWER STEERING (HOT), ENGINE COOLING SYSTEM.
- CHECK FUEL LINES FOR LEAKS, DAMAGE, AND PROPER POSITIONING.

BODY OPERATIONS

- INSTALL LOOSE ITEMS — SUCH AS WHEEL COVERS, CIGAR LIGHTER, ANTENNA, LUGGAGE RACK, EXTERIOR MIRRORS. ANTI-THEFT WHEEL LUG NUTS AND OTHER OPTIONAL EQUIPMENT.
- CHECK OPERATION OF DOOR LATCHES.
- CHECK OPERATION OF SIDE WINDOWS.
- CHECK SEAT BELTS FOR PROPER INSTALLATION.
- CHECK OPERATION OF SEATBACK LATCHES.
- REMOVE WIPER BLADE PROTECTORS.

CHASSIS OPERATIONS

- CHECK AND TOP-UP FLUID LEVELS IN MANUAL TRANSMISSION.
- ADJUST TIRE PRESSURES TO SPECIFICATION.
- CHECK STEERING GEAR AND FLEX COUPLING STEERING LINKAGE, AND SUSPENSION FOR DAMAGE OR LOOSE FASTENERS.
- CHECK FLUID LINES FOR DAMAGE, LEAKS AND PROPER POSITIONING.

ROAD TEST OPERATIONS

- CHECK STEERING COLUMN LOCK.
- CHECK STARTING OF ENGINE IN PARK AND NEUTRAL.
- CHECK OPERATION OF HORN, WINDSHIELD WIPER AND WASHER, LAMPS, SIGNALS, HAZARD FLASHER AND INSTRUMENTS.
- CHECK THROTTLE OPERATION AND IDLE RETURN.
- CHECK CHOKE LINKAGE FOR FREEDOM OF MOVEMENT (EXCEPTION TAURUS/SABLE).
- CHECK OPERATION OF HEATER, AIR CONDITIONER, DEFROSTER, VENTILATION SYSTEM, RADIO, SEAT BELT WARNING SYSTEM AND ALL OTHER OPTIONAL EQUIPMENT.
- CHECK BRAKES (INCLUDING PARKING BRAKE AND WARNING LAMP).
- CHECK STEERING CONTROL.
- CHECK DRIVEABILITY — SEE EMISSION COMPLIANCE REQUIREMENTS.
- CHECK DRIVEABILITY DURING ROAD TEST (INCLUDING FAST IDLE RETURN TO CURB IDLE DURING WARM-UP). IF AN OVERT IDLE SPEED PROBLEM EXISTS, CHECK AND ADJUST ENGINE IDLE SPEEDS (INCLUDING T.V. LINKAGE WHEN NECESSARY) TO SPECIFICATIONS SHOWN ON THE VEHICLE EMISSION CONTROL INFORMATION DECAL.
- CHECK AUTOMATIC TRANSMISSION OR MANUAL TRANSMISSION AND CLUTCH PERFORMANCE.
- CHECK FOR SQUEAKS AND RATTLES.
- CHECK FOR DRIVE BELT NOISE, TIGHTEN LOOSE BELTS.
- CHECK EXHAUST SYSTEM FOR LEAKS.

APPEARANCE OPERATIONS

- WASH AND PERFORM DETAILED CLEAN UP OF INTERIOR AND EXTERIOR.
- TOUCH UP MINOR PAINT BLEMISHES (BRUSH, AEROSOL CAN AND/OR SPOT POLISH).
- CHECK FOR NECESSARY OWNER INFORMATION MATERIAL IN GLOVE COMPARTMENT.
- REMOVE SEAT AND CARPET PROTECTION COVERS.

CA6832-F

PRE-DELIVERY SERVICES (Continued)

LUXURY CARS

UNDERHOOD OPERATIONS

- CHECK EMISSION CONTROL SYSTEM FOR LOOSE, MISSING OR DAMAGED COMPONENTS. ALSO CHECK FOR AND CORRECT LOOSE OR DISCONNECTED ELECTRICAL AND VACUUM CONNECTIONS.
- CHECK AND TOP-UP ALL FLUIDS TO SPECIFIED LEVELS — ENGINE OIL, BRAKE MASTER CYLINDER, WINDSHIELD WASHER RESERVOIR, AUTOMATIC TRANSMISSION, POWER STEERING (HOT), ENGINE COOLING SYSTEM.
- CHECK FUEL LINES FOR LEAKS, DAMAGE, AND PROPER POSITIONING.
- CHECK FOR 12.45 OPEN CIRCUIT VOLTAGE ON MAINTENANCE-FREE BATTERY (1.230 SPECIFIC GRAVITY ON NON-MAINTENANCE-FREE BATTERY), CHARGE IF NECESSARY.

BODY OPERATIONS

- INSTALL LOOSE ITEMS — SUCH AS WHEEL COVERS, CIGAR LIGHTER, ANTENNA, ANTI-THEFT WHEEL LUG NUTS AND OTHER OPTIONAL EQUIPMENT.
- REMOVE INSTRUMENT PANEL LENS COVERING — CONTINENTAL ONLY.
- CHECK OPERATION OF SIDE WINDOWS.
- CHECK OPERATION OF DOOR LATCHES.
- CHECK SEAT BELTS FOR PROPER INSTALLATION.
- CHECK OPERATION OF SEAT BACK LATCHES.

CHASSIS OPERATIONS

- ADJUST TIRE PRESSURES TO SPECIFICATION.
- CHECK STEERING GEAR AND FLEX COUPLING STEERING LINKAGE, AND SUSPENSION FOR DAMAGE OR LOOSE FASTENERS.
- CHECK FLUID LINES FOR DAMAGE, LEAKS AND PROPER POSITIONING.

ROAD TEST OPERATIONS

- CHECK STEERING COLUMN LOCK.
- CHECK STARTING OF ENGINE IN PARK AND NEUTRAL.
- CHECK OPERATION OF HORN, WINDSHIELD WIPER AND WASHER, LAMPS, SIGNALS, HAZARD FLASHER AND INSTRUMENTS.
- CHECK THROTTLE OPERATION AND IDLE RETURN.
- CHECK CHOKE LINKAGE FOR FREEDOM OF MOVEMENT (EXCEPT ON TAURUS/SABLE).
- CHECK OVERALL SYSTEM OPERATION INCLUDING FUNCTION OF ALL CONTROLS OF HEATER, AIR CONDITIONER, DEFROSTER, VENTILATION SYSTEM, RADIO, SEAT BELT WARNING SYSTEM, ELECTRIC LUGGAGE COMPARTMENT LOCK/RELEASE, AND ALL OTHER OPTIONAL EQUIPMENT SUCH AS ELECTRONIC TRIPMINDER AND COMPASS.
- CHECK BRAKES (INCLUDING PARKING BRAKE AND WARNING LAMP).
- CHECK STEERING CONTROL.
- CHECK DRIVEABILITY DURING ROAD TEST (INCLUDING FAST IDLE RETURN TO CURB IDLE DURING WARM-UP). IF AN OVERT IDLE SPEED PROBLEM EXISTS CHECK AND ADJUST ENGINE IDLE SPEEDS (INCLUDING TV LINKAGE WHEN NECESSARY TO SPECIFICATIONS SHOWN ON THE VEHICLE EMISSION CONTROL INFORMATION DECAL).
- CHECK AUTOMATIC TRANSMISSION PERFORMANCE INCLUDING INITIAL ENGAGEMENT AND SHIFT POINTS.
- CHECK FOR SQUEAKS, RATTLES, AND UNUSUAL NOISES.
- CHECK FOR ACCESSORY DRIVE BELT NOISE AND TIGHTEN AS REQUIRED.
- CHECK EXHAUST SYSTEM FOR LEAKS.

APPEARANCE OPERATIONS

- WASH VEHICLE AND PERFORM DETAILED CLEAN UP OF INTERIOR AND EXTERIOR SURFACES INCLUDING GLASS AND TRIM.
- CHECK OVERALL APPEARANCE INCLUDING FIT OF BODY PANELS, MOULDINGS, DOOR AND SEAT TRIM, CARPETING, AND LUGGAGE COMPARTMENT TRIM.
- INSPECT EXTERIOR AND INTERIOR FOR ANY IMPERFECTIONS IN PAINT AND METAL FINISH AND TOUCH UP ANY MINOR CHIPS AND SCRATCHES.
- CHECK THAT ALL NECESSARY OWNER INFORMATION MATERIAL SUCH AS WARRANTY FACTS BOOKLET, OWNER CARD AND OWNER GUIDE ARE IN THE GLOVE COMPARTMENT.
- REMOVE SEAT AND CARPET PROTECTIVE COVERS AND ENSURE THAT THERE ARE NO STAINS OR DIRT BENEATH THEM.

CA8202-D

UNDERHOOD OPERATIONS

• Check Engine Oil Level

On all engines, the oil level should be within the SAFE or cross-hatched (Taurus/Sable) range on the dipstick. Add oil as required.

• Check Brake Master Cylinder Fluid Level

Cast Iron Reservoir

Except Taurus/Sable

Push the master cylinder cap retainer to one side, and remove the filler cap from the master cylinder. The gasket that seals the master cylinder should come off with the cap. Fill the reservoir to full or within 6.35mm (1/4-inch) from the top of the dual reservoirs. Install the filler cap, making sure the gasket is properly seated in the cap. Use only a DOT 3 brake fluid meeting specification ESA-M6C25-A such as Ford Brake Fluid C6AZ-19542-A or B or equivalent.

Plastic Reservoir

To check fluid level, visually inspect the level through the translucent master cylinder reservoir. It should be between MIN and MAX level marks embossed on the side of the reservoir. If the level is low, carefully clean and remove reservoir cap and fill to MAX level. Add only a DOT 3 brake fluid meeting Ford Specification ESA-M6C25-A such as Ford Heavy Duty Brake Fluid.

Anti-Lock Brakes

To check fluid level in the master cylinder reservoir, turn ignition to OFF, pump brake pedal at least 20 times or until the pedal feel becomes hard, turn ignition key to ON position and wait at least 60 seconds to be sure the fluid level is stabilized. The fluid level should be at the MAX line (25mm (1 inch) below the top) as indicated on the front and side of the reservoir. If the level is low, carefully clean and remove cap and top off to the MAX line.

Add only a DOT 3 brake fluid meeting Ford specification ESA-M6C25-A such as Ford Heavy Duty Brake Fluid. The level will decrease with accumulated mileage. This is a normal condition associated with wear of disc brake linings. If the fluid is excessively low, have the brake system inspected.

• Check Windshield Washer Reservoir Level (1/4 Full)

Add fluid such as Ford Ultra-Clear Windshield Washer Solution C9AZ-19550-A or equivalent, as necessary.

• Check Automatic Transmission/Transaxle Fluid Level

Transmission/Transaxle—Operating Temperature

The automatic transmission/transaxle should be checked at an operating temperature of 66° to 77°C (150° to 170°F) (dipstick is hot to the touch). The operating temperature may be obtained by driving 24-32 km (15 to 20 miles) of city-type driving with the outside temperature above 10°C (50°F).

Transmission/Transaxle—Room Temperature

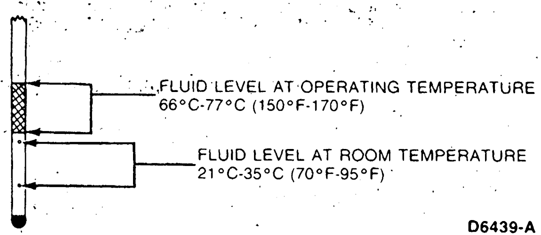
If the transmission/transaxle is not at an operating temperature of 66° to 77°C (150° to 170°F) and it becomes necessary to check the fluid level (such as pre-delivery), the fluid may be checked at room temperature, 21° to 35°C (70° to 95°F) (dipstick cool to touch).

AXOD

The AXOD transaxle cannot have fluid level established at room temperature.

Dipstick Reading

The fluid level on the dipstick should be within the cross hatched area at operating temperature. The fluid level on the dipstick should read between the holes at room temperatures.


FLUID LEVEL AT OPERATING TEMPERATURE
66°C-77°C (150°F-170°F)
FLUID LEVEL AT ROOM TEMPERATURE
21°C-35°C (70°F-95°F)

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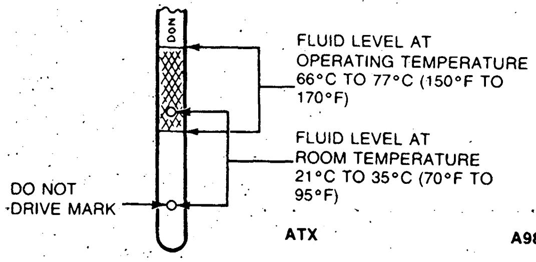

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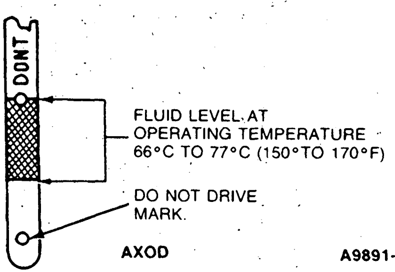

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UNDERHOOD OPERATIONS (Continued)

Check the fluid as follows:

1. With the transmission/transaxle in PARK, engine at idle rpm, foot brakes applied, and vehicle on level surface, move the transmission/transaxle selector lever through each range, allowing time in each range to engage transmission. Return to PARK, applying parking brake fully, and block the wheels. **Do not turn off the engine during the fluid level check.**
2. Clean all dirt from the transmission/transaxle fluid dipstick cap before removing the dipstick from the filler tube.
3. Pull the dipstick out of the tube, wipe it clean, and push it all the way back into the tube. Be sure it is fully seated.
4. Pull the dipstick out of the filler tube again, and check the fluid level.

   IMPORTANT: The fluid level indication on the dipstick will be different at operating temperature and room temperature. For the correct fluid level reading on the dipstick, follow the appropriate instructions stated previously.

   Before adding fluid, be sure that the correct type will be used. If in doubt, check the Vehicle Certification Label affixed to the left front door lock face panel or door pillar for the Transmission/Transaxle Code. Also, the fluid is stamped on the dipstick.

   For automatic transaxles and the Automatic Overdrive Transmission (AOD and A4LD), use Motorcraft DEXRON®II or equivalent fluid. For C5 automatic transmission (Code C), use Motorcraft Type H automatic transmission fluid or equivalent fluid that meets Ford Specification ESP-M2C166-H.

   CAUTION: Use of a fluid other than specified could result in transmission malfunction and/or failure.

   If necessary, add enough fluid through the filler tube to raise the level to the correct position. Do not overfill the transmission, because it will result in foaming, loss of fluid through the vent, and possible transmission malfunction. If overfill occurs, excess must be removed.
5. Install the dipstick, making sure it is fully seated in the tube.

   If the transmission fluid level is correctly established at 21° to 35°C (70° to 95°F), it will appear in the cross hatch area on the dipstick when the transmission reaches an operating temperature of 66° to 77°C (150° to 170°F). **Do not overfill or underfill.**

   Overfill can cause the fluid to foam and spill out through the transmission vent resulting in a transmission malfunction.

   Underfill can result in transmission loss of engagement or slipping. This condition is most evident in cold weather or when the vehicle is parked or being driven on a hill.

   If the transmission fluid level is checked when the fluid is at room temperature, the dipstick could indicate that fluid should be added if the dipstick is misread. If fluid is added at this time, an overfill condition could result when the fluid reaches operating temperatures of 66° to 77°C (150° to 170°F) (dipstick hot to touch).

• Check Power Steering Pump Reservoir Fluid Level—Hot

Run the engine until the fluid is at normal operating temperature, turn the steering wheel all the way to the left and right several times, and shut off the engine.

Check the fluid level in the power steering reservoir. The level must show in the FULL HOT range on the dipstick. Do not overfill. Remove excess fluid with a suction device. Check for adequate power steering hose clearances to moving parts (belts, pulleys) and the exhaust manifold.

If the level is low, add Automatic Transmission Fluid Type F, meeting specification, to the proper level on the dipstick.

• Check Engine Cooling System

With a cold engine, the level must be maintained at or above the ADD COLD mark (or at or above 51mm (2 inches) above the bottom of the combined coolant/windshield washer bottle).

At normal engine operating temperature, the coolant level should be at the FULL HOT mark (or 101-152mm (4-5 inches) above the bottom of the combined coolant/windshield washer bottle).

If the coolant level in the reservoir is less than the indicated levels, a 50/50 mixture of E2FZ-19549-A (In Canada, Motorcraft CXC-8-B) coolant or equivalent and water should be added to the reservoir to the specified levels.

NOTE: Combined coolant/windshield washer bottles should be filled through the small opening at the top of the bottle.

If the reservoir is empty, allow engine to cool and add specified 50/50 coolant mixture to the base of the filler neck in the radiator and to the recovery reservoir as specified above.

UNDERHOOD OPERATIONS (Continued)

WARNING: NEVER REMOVE THE RADIATOR CAP OR VENT PLUG ON THE WATER OUTLET CONNECTION (TAURUS/SABLE) UNDER ANY CONDITIONS WHILE THE ENGINE IS OPERATING. FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN DAMAGE TO THE COOLING SYSTEM OR ENGINE AND/OR PERSONAL INJURY. TO AVOID HAVING SCALDING COOLANT OR STEAM BLOW OUT OF THE RADIATOR, DO NOT REMOVE THE CAP FROM A HOT RADIATOR OR VENT PLUG (TAURUS/SABLE) WHEN THE ENGINE IS HOT. WAIT UNTIL THE ENGINE HAS COOLED COMPLETELY, WRAP A THICK CLOTH AROUND THE RADIATOR CAP, AND TURN IT SLOWLY TO THE FIRST STOP. STEP BACK WHILE THE PRESSURE IS RELEASED FROM THE COOLING SYSTEM. WHEN ALL THE PRESSURE HAS BEEN RELEASED, PRESS DOWN ON THE CAP (STILL WITH A CLOTH), TURN AND REMOVE IT. ON TAURUS/SABLE, ONLY AFTER THE RADIATOR CAP IS REMOVED AND COOLANT IS BELOW THE SPECIFIED LEVEL, REMOVE THE VENT PLUG ON THE WATER OUTLET CONNECTION. DO NOT ATTEMPT TO TURN THE PLASTIC RADIATOR CAP-LIKE GASKET UNDER THE VENT PLUG. TO DO SO MAY CAUSE DAMAGE TO THE GASKET. ENSURE THE VENT PLUG IS INSTALLED AFTER ADDING COOLANT THROUGH FILLER NECK AND BEFORE STARTING ENGINE. COOLANT MAY SPRAY OUT.

Carefully examine the radiator cap and filler neck to ensure the cap is turned to the pressure stop. Check the radiator cap and filler neck for damage. Check the overflow hose for correct installation to the radiator and overflow bottle, and to ensure it is not cut, kinked or damaged.

Check emission control system for loose, missing, or damaged components, and also check for and correct any loose or disconnected vacuum and electrical connections.

• Check Fuel Lines

Check fuel lines for leaks, damage, kinks, or interference with adjacent moving or frictional components.

• Check Battery Charge

Luxury Cars

With battery temperature at 26.6°C (80°F), the battery should have a specific gravity reading of not less than 1.230 for non-maintenance free batteries and an open circuit voltage of not less than 12.45 volts for maintenance free batteries.

BODY OPERATIONS

• Install Wheelcovers

Inspect wheelcovers and hub caps for dents or other shipping damage. Refer to Body, Chassis and Electrical manual, Section 11-01 for optional wheelcovers and/or special installation instructions for the vehicle involved.

• Install Radio Antenna

Check type and location specified, and install, using installation instructions and template supplied with antenna kit.

• Install Cigar Lighter

Follow manufacturer's instructions supplied with kit.

• Install Luggage Rack

Follow manufacturer's instructions supplied with kit.

• Instrument Panel Lens Protector

Continental

Remove the protective lens covering and discard. The covering is best removed by pulling/working off from the ends (sides) of lens.

• Check Door Latch Operation

Ensure all doors close securely without being slammed.

• Check Seat Belts

Check that each seat belt is properly installed. If the seat belt attachment is hidden or covered, pull on the seat belt to determine that it is anchored to the vehicle. Check automatic retractors for full extension, retraction, and retention of belt. Check buckle and clasp for proper retention, release, and length adjustment.

• Check Seat Back Latches Operation

Fold-Down Seat Backs

Check self-locking mechanism on all folding seats. Seat back must lock automatically in its normal upright position.

If equipped with inertia latch, check for free movement of the latch pawl, using the following procedure:

- With the seat installed in the vehicle, tilt the seat back forward until it is in a vertical position.
- Grasp the seat back and bounce it against its rear stop (the seat back will bounce forward from the stop, momentarily engaging the latch, then return to its normal rearward position).
- While holding the seat back and jerking it forward as soon as it contacts and bounces from the rear stop, check to be sure the seat back is restricted from tilting full forward.

NOTE: This check verifies that the latch pawl is free to move and lock up.

CHASSIS OPERATIONS

• Check and Top-Up Fluid Levels

Manual Transmission/Transaxle

Clean dirt and grease from the area around the filler plug, and remove the filler plug from the side of the case.

If lubricant does not flow from the filler hole, fill the case with a specified lubricant until it is level with the bottom of the filler hole. Install the filler plug.

• Adjust Tire Pressures

Check each tire to be sure the air pressure agrees with that specified for the tire and vehicle. Adjust pressure as necessary.

• Check Steering Linkage

Rear Wheel Drive

Inspect for proper assembly and components. Check steering linkage and the steering gear-to-rail attachments for looseness or omission. Check steering gear-to-steering column flex coupling for proper installation and alignment. Check for installation of cotter pins, where applicable. Check for interference between steering linkage and adjacent components through full left and right turn.

Front Wheel Drive

Inspect for proper assembly and components. Check steering linkage and the steering gear-to-dash attachments for looseness or omission. Check steering gear-to-steering U-joint coupling for proper installation and alignment. Check for installation of cotter pins, where applicable. Check for interference between steering linkage and adjacent components through full left and right turn.

Check for adequate power steering hose clearance to moving parts (belts, pulleys) and the exhaust manifold.

• Check Front and Rear Suspension

Rear Wheel Drive

Inspect for proper assembly and components. Check upper and lower ball stud-to-spindle attachments for cotter pins. Check upper and lower suspension arm inner pivot attachments and strut attachments for looseness or omission of parts. Tighten obviously loose fasteners.

Front Wheel Drive

Inspect for proper assembly and components. Check lower ball stud-to-knuckle attachments. Check lower suspension arm inner pivot and strut attachments for looseness or missing parts. Tighten obviously loose fasteners.

System Check—Automatic Leveling

Except Taurus/Sable

1. Set vehicle at recommended curb ride height.
2. Start and run engine.
3. Apply a load to the rear of the vehicle (two people or about 300-350 lbs).
    a. There should be a 7-13 second delay before the compressor turns on and the rear of the vehicle starts to rise.
    b. The vehicle should rise and level within two minutes after the compressor starts to run.
4. Remove the load applied in Step 3. There should be a 7-13 second delay before the vehicle starts to lower.
5. If the rear of the vehicle does not rise or lower during the system check, refer to Body, Chassis and Electrical manual, Section 14-37.

• Fluid Lines

Check Engine Cooling System

Inspect radiator and heater hose for proper installation.

Make sure all hose supporting brackets are in place and that the hoses are properly installed in the supports.

• Check Brake System

Check lines and hoses for fluid leaks, damage, kinks, or interference with adjacent moving or frictional components. Make sure the lines are properly installed in the routing clamps. Check brake booster and master cylinder for vacuum or fluid leaks.

• Check Fuel System

Check lines and hoses for leaks, damage, kinks, or interference with adjacent moving or frictional components. Make sure the lines are properly installed in the routing clamps.

• Remove Transit Brackets

Remove and discard transit brackets from applicable vehicles.

ROAD TEST OPERATIONS

• Check Steering Column Ignition Lock

Place transmission/transaxle selector lever in PARK position on vehicles equipped with automatic transmission/transaxle; place in any position if equipped with manual transmission/transaxle. Turn key to LOCK position. Manual transmission/transaxle and floor shift models are equipped with lock button on the left side of the steering column, which must be depressed first.

Turn the steering wheel left or right slightly, until it snaps into the lock detent.

Check to see if the steering wheel is locked in both directions. With key in the ignition lock, open driver's door to check operation of key removal warning buzzer.

ROAD TEST OPERATIONS (Continued)

- **Check Neutral Start Switch Operation**

  Start the engine with transmission/transaxle selector lever in PARK and again in NEUTRAL. Engine should start in these gears only. Check manual transmission/transaxle vehicles to ensure that engine cannot be started unless clutch pedal is fully depressed.

- **Check Horn**

  Check horns to be sure horn(s) blow at all contact positions.

- **Check Windshield Wipers/Washers**

  Check for proper operation, including wiper sweep and park. Check washer operation.

- **Windshield Wiper Blade**

  For maximum wiper effectiveness, the windshield and wiper blades must be kept clean. Foreign matter on the windshield or wiper blades may cause streaking or smearing. If blades do not clean properly, wash the windshield and wiper blades with undiluted Ford Ultra Clear C9AZ-19550-A, B or equivalent or mild detergent. Rinse with water while rubbing with clean cloth. For access to the blades, turn ignition to ACC with the wipers on. When wiper blades are approximately vertical, turn ignition off.

  If you find cracks or breaks in the rubber, replace wiper blades with new elements.

  CAUTION: Do not allow wiper blades to come in contact with gasoline, kerosene, paint thinner, or similar solvents.

- **Check Lamps**

  Check head, tail, signal, courtesy, instrument warning, and indicator lamps for proper operation of switches and brightness, including operation of oil pressure and alternator warning lamps (if so equipped). Check detent action and return of turn signal lever by making full left and right turns during road test. Check the operation of hazard warning flasher system.

- **Check Heater, Air Vents and Air Conditioner Operation**

  Check the following items: air leaks at vent openings, around door seals and windows, sufficient heat from floor outlets. Check blower operation in each switch position, temperature control operation, operation of open air ducts and vents, operation of air conditioner function controls for proper air discharge and air conditioning discharge temperatures. Refer to Section 50-32 for special instructions.

- **Check and Set Radio**

  Check for proper operation of radio and tape player, if so equipped. Set radio push-buttons for local stations.

- **Check Seat Belt Warning System**

  Check seat belt warning system for proper operation.

- **Check Brakes**

  Depress foot brake pedal and check for good height before road testing. Check and correct, if required, the following conditions: pull in either direction, harshness or noise, excess pedal effort, spongy feel, and operation of the brake warning lamp. Avoid sudden, hard stops; make slow, gradual stops.

  Check the operation of the parking brake and indicator lamp. If equipped with an indicator lamp, be sure it glows when parking brake is engaged.

- **Check Steering Control**

  Check for harshness, noise, wander, or free play. Check steering wheel return for stiffness or inconsistency in either direction.

- **Check Speedometer, Odometer and Tachometer**

  Verify operation, then observe that excessive needle bounce does not occur.

- **Check Engine Driveability**

  During start-up, acceleration, cruise, and deceleration, check unsatisfactory engine performance, such as:

  - Prolonged starting (cranking).
  - Hard starting (does not quite catch).
  - False starts (quits immediately after starting).
  - Fast idle and return to curb idle during warm-up.
  - Idles rough, stalls.
  - Idles unusually slow.
  - Idles unusually fast (races, pulls).
  - Stumbles, backfires, stalls, or hesitates during acceleration.
  - Spark knock during light-to-moderate acceleration.
  - Sluggish, poor acceleration.
  - Surges or lopes.
  - Hissing, unusual noises, or vibration under hood.
  - Smokes.
  - Does not shift properly (hard shifting or engaging, delays, or jerks).
  - Accessory drive belt noise, tighten loose belts.
  - Any other unsatisfactory conditions observed by the technician.

  If an idle speed problem exists, check and adjust engine idle speeds to specification shown on the Vehicle Emission Control Information Decal.

ROAD TEST OPERATIONS (Continued)

On Taurus/Sable, Escort/Lynx and EXP vehicles, if a driveability problem exists, check the engine systems with quick test equipment. Perform the diagnostic procedures in the Engine/Emissions Diagnosis* manual.

NOTE: Whenever it is required to adjust the idle speed by more than 50 rpm on AOD equipped vehicles, the adjustment screw on the TV linkage lever at the carburetor should also be readjusted as shown in the following chart. For ATX equipped vehicles, whenever it is required to adjust engine idle speed by more than 50 rpm, adjust the transaxle throttle linkage (except 2.3L CFI engine with ATX).

• Check Automatic Transmission/Transaxle Performance

Check Transmission/Transaxle Initial Engagement

Initial engagement checks are made to determine if initial band and clutch engagements are smooth.

Run the engine until its normal operating temperature is reached. With the engine at the correct idle speed, shift the selector lever from N to 2, D to 1, and R, for AOD, N to D, Ⓓ to 1 and R, or for A4LD transmission, N to 2, Ⓓ to 1, and D to R. Observe the initial band and clutch engagements. Band and clutch engagements should be smooth in all positions.

For vehicles with curb idle speed adjustment capability, if the idle speed has increased or decreased by 50 rpm or more, the following applies:

Idle Speed Change	TV Linkage Adjustment at the Carburetor
50 RPM or More Decrease	Check Linkage Adjustment at the Carburetor (AOD) or Trunnion (ATX) According to Procedure in Section 17-20 (AOD) or 17-25 (ATX).
Less Than 50 RPM	No Change Required.
50 RPM or More Increase	Check Linkage Adjustment at the Carburetor (AOD) or Trunnion (ATX) According to Procedure in Section 17-20 (AOD) or 17-25 (ATX).

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Check Shift Points

Check the minimum throttle upshifts in D (DRIVE). The transmission/transaxle should start in first gear, shift to second, and then shift to third (or finally shift to fourth on A4LD and AOD equipped vehicles) within the shift points specified in the Service Specifications manual.

With transmission/transaxle in third gear, depress the accelerator pedal through the detent (to the floor). The transmission/transaxle should shift from third to second or third to first, depending on the transmission/transaxle type and vehicle speed.

• Check Manual Transmission/Transaxle and Clutch Performance

Check the clutch for chatter, slipping, excess pedal effort, noise, and disengagement of the clutch. Check manual transmission/transaxle for proper shifter function (no excessive play or binding), gear engagement synchronizer function, and noise.

• Check for Squeaks and Rattles

Throughout the road test and especially on rough roads, listen for squeaks or rattles.

Listen for anything loose and for objectionable noise or vibration.

Check for belt noise; tighten loose belts.

• Check Exhaust System

Check for leaks or grounding to other components.

APPEARANCE OPERATIONS

• Wash and Clean Up Interior and Exterior

1. Wash the vehicle completely using warm water. Wipe dry.
2. Remove glass markings, tape, and stickers.
3. Ford Multi-Purpose Cleaner B8A-19523-A (diluted to proper concentration) or equivalent can be used effectively on exteriors, carpets, headliners, and white sidewall tires.
4. Remove the protective wax from bumpers.
5. Wipe the steering wheel. Make sure no grease or smudges have been left on any controls.
6. Check closely for any excess adhesive not removed by washing.
    - Check around the edges of vinyl roofs.
    - Check around seals at windows or doors.
    - Check around windshield and rear window seals.

• Check Exterior and Interior Appearance

Examine fit of exterior body panels and interior trim panels. Perform minor adjustments as necessary.

Bumpers and Trim Mouldings: check condition, fit, and alignment.

Weatherstrip: check fit and retention.

Vinyl Roof: visually inspect vinyl roof for good fit. Check for cuts, wrinkles, bubbles, excess adhesive around the edges; be sure there are no exposed, raw, or cut edges.

Remove any protective film covering instrument panel finish panels.

• Touch Up Minor Paint Blemishes

Check for any imperfections in paint and metal finish.

Correct minor chips and scratches with brush or spray can touch-up paint, and polish out any surface blemishes.

*Can be purchasd as a separate item.

APPEARANCE OPERATIONS (Continued)

- **Check Glove Compartment For:**
  - Warranty Facts Booklet.
  - Ownercard.
  - Owner Guide Maintenance Pullout.
  - Consumer Information Folder.
  - Other Owner Publications.
  - CB Radio Operator's Manual (if equipped).

Make sure that the starting instructions sleeve is on the LH visor.

Seat and Carpet Protective Covers—Removal

Remove the plastic covers from the upholstery. Ensure that there are no stains or dirt on the upholstery.

Remove protective covers from the carpeting, and make sure there is no dirt under them.

SECTION 50-04 Hoisting and Jacking

SUBJECT	PAGE
DESCRIPTION	
Hoist, Drive-On	50-04-4
Hoist, Frame Contact	50-04-3
Hoist, Rail Type	50-04-4
Hoist, Twin Post	50-04-4
DESCRIPTION (Cont'd.)	
Hoist, Twin Post with Foldout Adapters	50-04-4
Hoisting Instructions	50-04-3
Jack, Floor	50-04-1
VEHICLE APPLICATION	50-04-1

VEHICLE APPLICATION

All vehicles.

DESCRIPTION

Jack, Floor

CAUTION: The service jack provided with the vehicle is only intended to be used in an emergency for changing a deflated tire. Never use the service jack to hoist the vehicle for any other service. Refer to the Owner Guide when using the jack supplied with the vehicle.

Lincoln Town Car, Ford Crown Victoria/Mercury Grand Marquis

When a stationary floor jack or a roll jack is to be used, there are several specific recommended points of contact. Either side of the front of the vehicle may be raised by jack contact at the lower control arm and spindle connection (Fig. 1), or by jack pressure on the front crossmember or on the side rail to which the stabilizer is connected. Care must be exercised not to contact the steering linkage or to compress the stabilizer link insulators.

Position jacks under the rear axle housing between the suspension arm brackets and the differential housing. Do not place jacks under the suspension arm brackets.

Mark VII/Continental, Thunderbird/Cougar, Mustang

When using a floor jack, the vehicle may be raised at several locations. The front of the vehicle may be lifted by positioning the jack under the center of the No. 2 crossmember. The front, as well as either side of the rear end, may be lifted by positioning the floor jack under the rocker flange at the contact points used for the service jack supplied with the vehicle. To lift both sides of the rear at once, position the floor jack under the differential housing. Care must be taken to ensure that no contact is made with the rear axle housing cover (Fig. 2).

Do not attempt to use jack pressure on either front or rear bumpers of any unitized vehicle.

Position jacks under the rear axle housing between the suspension arm brackets and the differential housing. Do not place jacks under the suspension arm brackets.

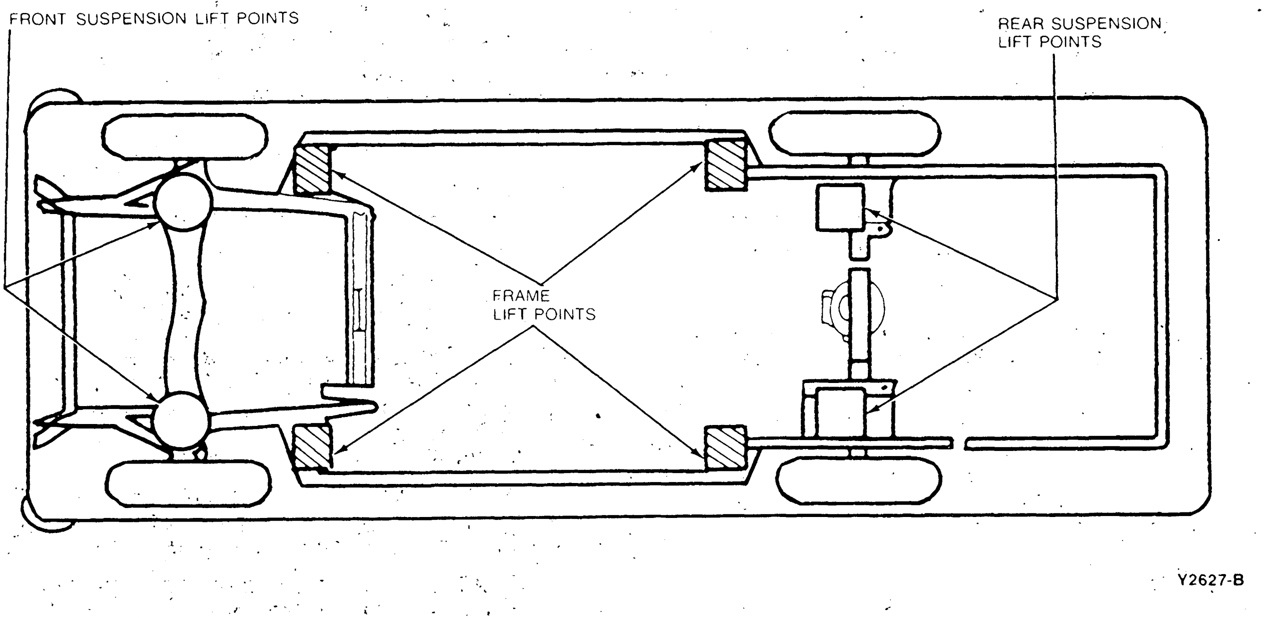

FIG. 1 Frame Contact Lift Points—Lincoln Town Car, Ford Crown Victoria/Mercury Grand Marquis

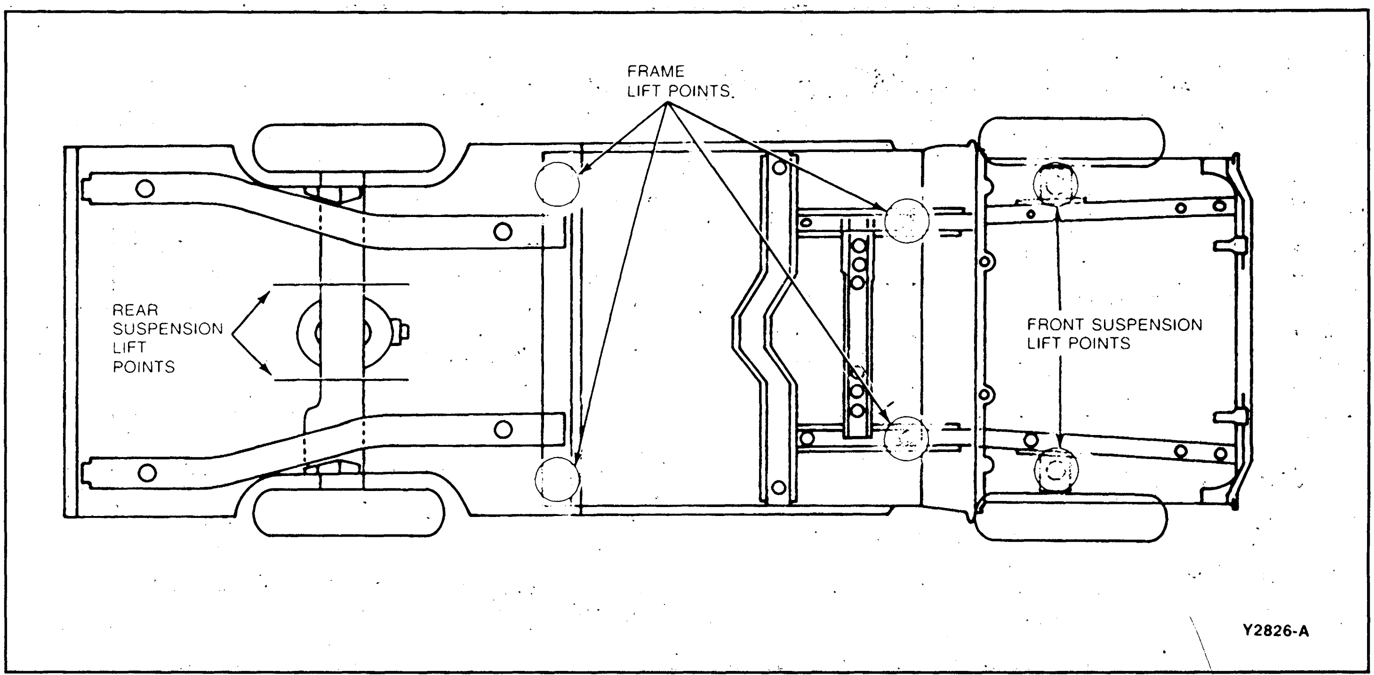

FIG. 2 Frame Contact Lift Points—Mark VII/Continental, Thunderbird/Cougar, Mustang

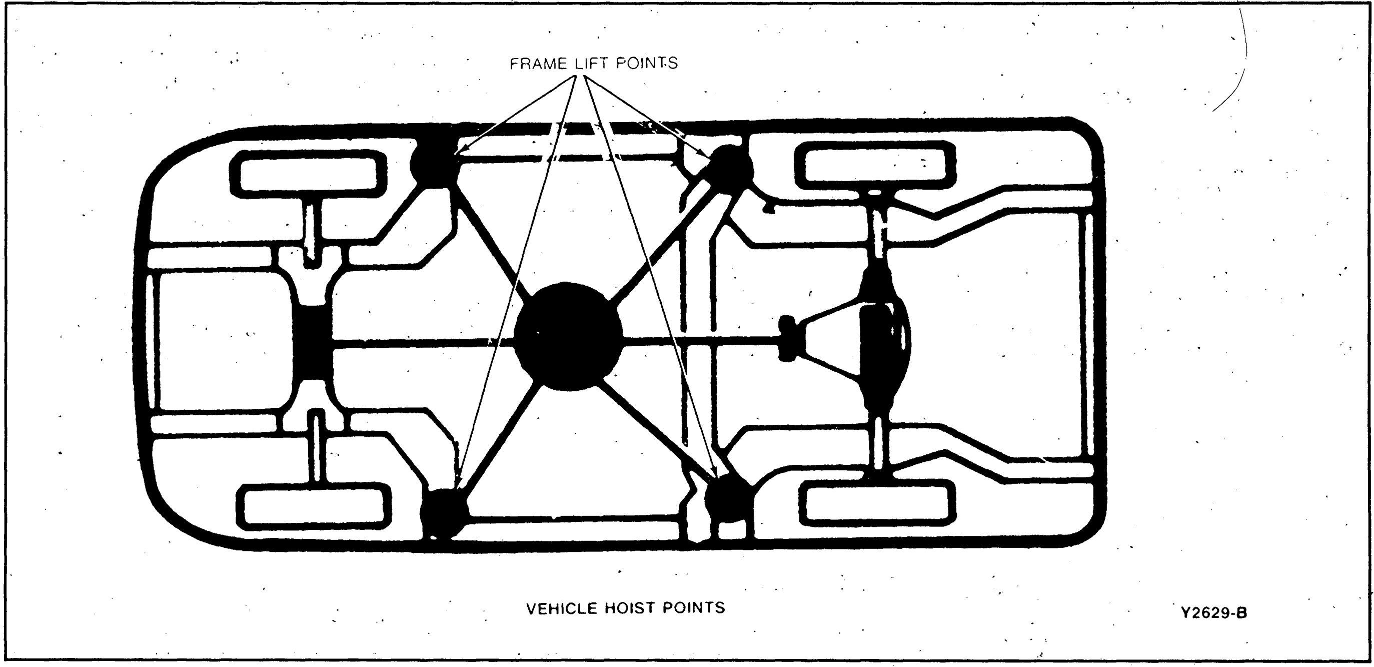

FIG. 3 Frame Contact Lift Points—Merkur Scorpio

XR4TI/Scorpio

When using a floor jack, raise the front of the vehicle by positioning the floor jack under the front body rail behind the suspension arm-to-body bracket (Fig. 3).

Lift the front, as well as either side of the rear end, by positioning the floor jack under the rocker flange at the contact points used for the jack supplied with the vehicle. Raise the rear of the vehicle by positioning the floor jack under either lower control arm (Fig. 3).

Taurus/Sable

When using a floor jack, raise the front of the vehicle by positioning a floor jack under either the sub-frame or body side rail behind the engine support bracket (Fig. 4). The rear may be lifted by positioning a floor jack under either rear suspension body bracket (Fig. 4).

CAUTION: Under no circumstances should the vehicle ever be lifted by the front or rear control arms. Severe damage to the vehicle could result.

Tempo/Topaz, Escort/Lynx, EXP

When using a floor jack, the front of the vehicle may be raised by positioning the floor jack under the front body rail behind the suspension arm-to-body bracket (Fig. 5).

The rear of the vehicle may be raised by positioning the floor jack forward of the tie rod bracket. Escort/Lynx may be raised by positioning the floor jack under either rear lower control arm.

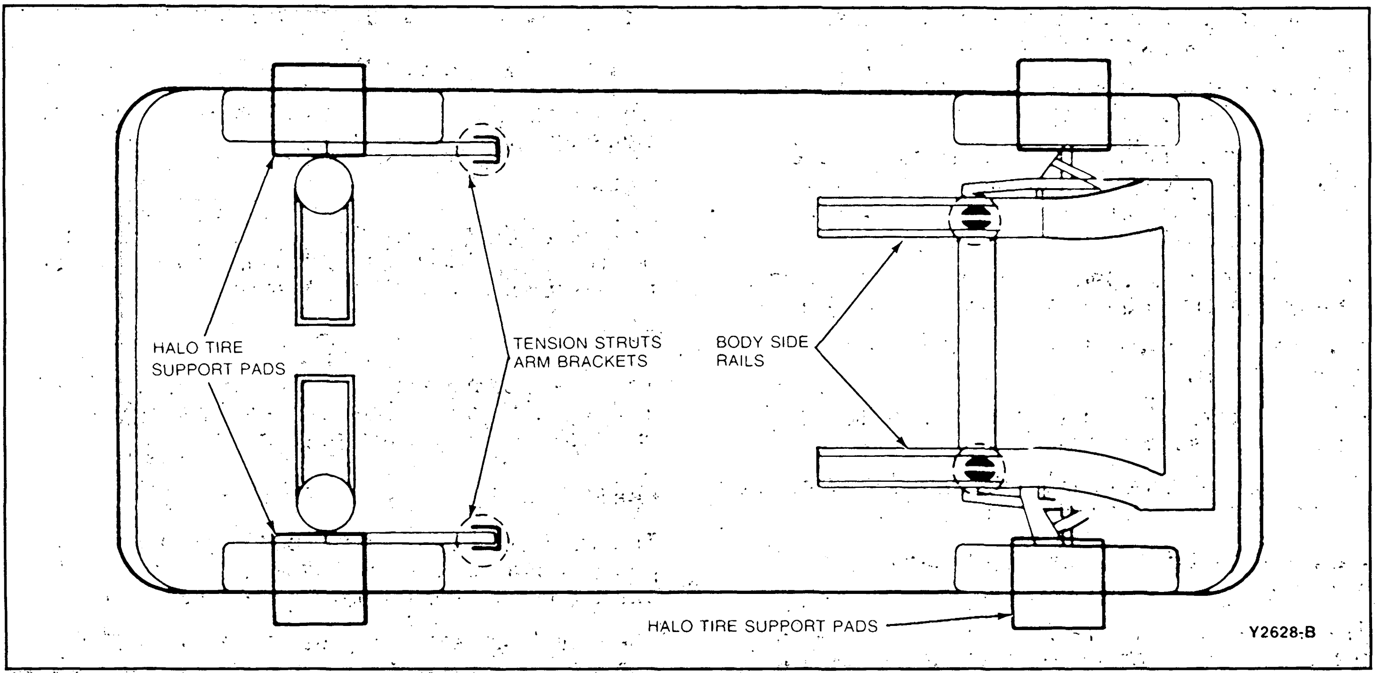

FIG. 4 Frame Contact Lift Points—Taurus/Sable

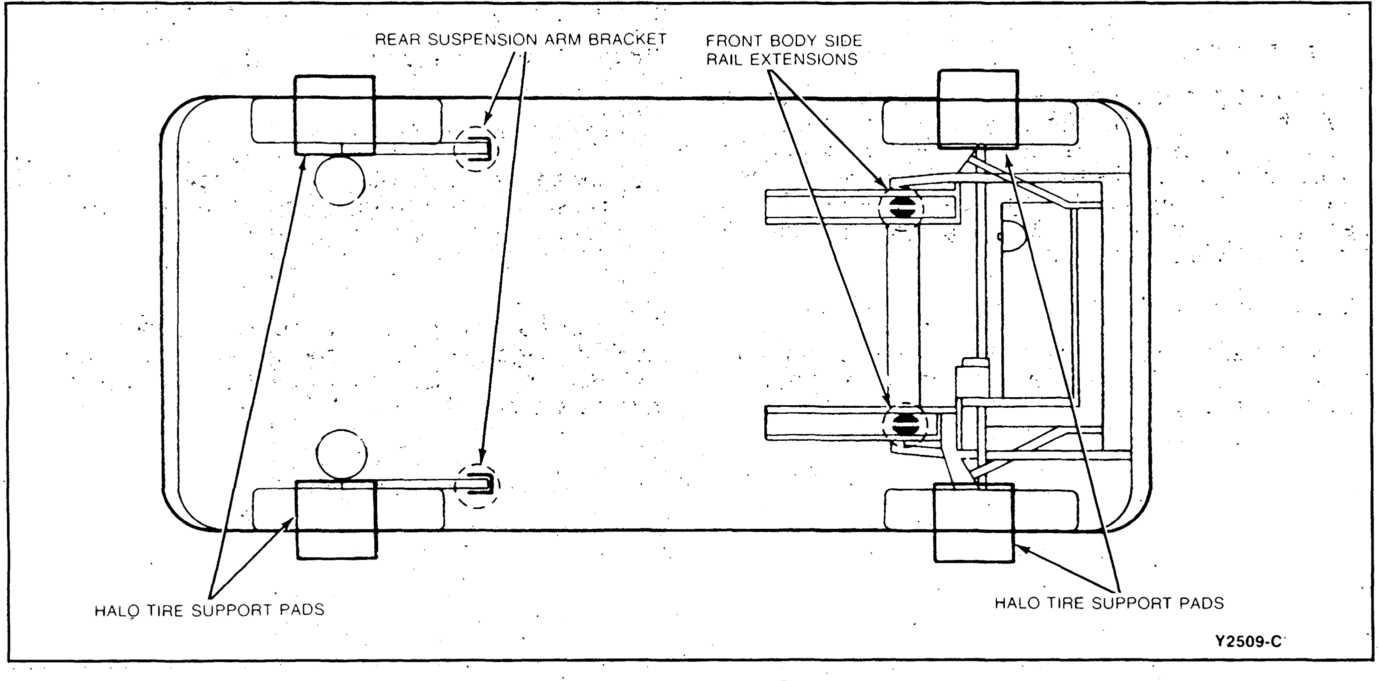

FIG. 5 Frame Contact Lift Points—Tempo/Topaz, Escort/Lynx, EXP

CAUTION: Under no circumstances should the vehicle ever be lifted by the front or rear control arms. Severe damage to the vehicle could result.

On vehicles equipped with All-Wheel Drive, the vehicle must be in 2-wheel drive or rotation from the wheel being removed could be transferred to one or more of the other wheels, causing the vehicle to move or fall off the jack.

Hoisting Instructions

For hoisting and lifting locations, refer to Figs. 1 through 5.

If a two-post hoist is used to lift a rear-wheel drive vehicle, place the adapters under the front suspension lower arms (Figs. 1, 2 and 3) (on front-wheel drive vehicles, place adapters under front body rail, behind the suspension arm-to-body bracket) (Figs. 4 and 5). **Do not allow the adapters to contact the steering linkage, suspension arms, stabilizer bar, or compress the stabilizer bar link insulators.**

Damage to suspension, exhaust and/or steering linkage components may occur if care is not exercised when positioning the hoist adapters of two-post hoists prior to lifting the vehicle.

Hoist, Frame Contact

On frame contact hoists, adapters are necessary to lift the vehicle. The adapters must be placed at four contact points (Figs. 1, 2, 3, 4 and 5). Position the adapters so they are centered on the adapter contact area. **All four contact points must contact the adapters.**

On front-wheel drive vehicles, the rear contact points are forward of the tie rod body brackets.

Exercise care when hoisting vehicles equipped with catalytic converter(s). On vehicles so equipped, ensure necessary clearance between hoist and exhaust system components before energizing hoist.

On Thunderbird/Cougar, place fork lifts under the axle housing inboard of the suspension arm brackets.

Do not position hoist pads under No. 3 crossmember.

NOTE: Ensure lifting pad clears catalytic converter bracket on passenger side.

On front-wheel drive vehicles, do not allow the adapters to contact the rear tie rod.

Mark VII/Continental, Thunderbird/Cougar, Mustang

The unitized body-frame construction requires special precautions and procedures when the vehicle is jacked up or hoisted. In some cases, special hoist adapters must be used as recommended by specific hoist manufacturers.

Hoist, Drive-On

To prevent possible damage to the underbody, do not drive the vehicle onto the drive-on hoist without first checking for possible interference between the upright flanges of the hoist rails and the underbody. Should there be interference, the hoist flanges should be modified as necessary and/or the approach ramps built up to provide the needed clearance.

Hoist, Twin Post

To ensure safe hoisting, the front post adapters must be positioned carefully to contact the center of the lower suspension arms.

Hoist, Twin Post with Foldout Adapters

Tempo/Topaz, Escort/Lynx, EXP

Do not contact catalytic converter hanger bracket on passenger side frame rail.

Front

To ensure safe hoisting, the front post adapters must be positioned carefully to contact the front body rail, behind the suspension arm-to-body bracket.

Rear

To prevent damage to the tie rod and the rod bracket, locate the adapters. Carefully raise the rear post and check the position of the adapters.

Hoist, Rail Type

The front adapters or hoist plates must be carefully positioned in contact with the center of the lower suspension arms to ensure safe, accurate lifting.

The rear hoist adapters must be positioned carefully under the rear axle to prevent damage to the shock absorbers when the vehicle is raised. The hoist rails should be raised slowly and the position of the adapters checked.

Tempo/Topaz, Escort/Lynx, EXP

Front

The front adapters or hoist plates must be carefully positioned in contact with the front body rail, behind the suspension arm-to-body bracket to ensure safe, accurate lifting.

Rear

The rear hoist adapters must be carefully positioned to avoid damage to the tie rod and tie rod bracket. The hoist rails should be raised slowly and the position of the adapters checked.

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Pre-Delivery 50-02

PRE-DELIVERY, MAINTENANCE AND LUBRICATION

GROUP 50

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BODY	50-41-1
BRAKES	50-12-1
CHARGING SYSTEM	50-31-1
CLUTCH AND MANUAL TRANSMISSIONS	50-16-1
COOLING SYSTEM	50-27-1
DIESEL ENGINES	50-22-1
DRIVING AXLES AND DRIVESHAFT	50-15-1
ENGINE EMISSION CONTROL SYSTEMS	50-29-1
EXHAUST SYSTEMS	50-26-1
FUEL SYSTEMS—GASOLINE	50-24-1
GASOLINE ENGINES	50-21-1
HOISTING AND JACKING	50-04-1
IDENTIFICATION CODES	50-00-1
LIGHTS, INSTRUMENTS, CONTROLS, HEATING, AIR CONDITIONING AND ACCESSORIES	50-32-1
LUBRICATION CHARTS AND LUBRICANT SPECIFICATIONS	50-03-1
PRE-DELIVERY AND NON-EMISSION SYSTEM SCHEDULED MAINTENANCE	50-02-1
STEERING	50-13-1
SUSPENSION	50-14-1
WHEELS AND TIRES	50-11-1

SECTION 50-00 Identification Codes

SUBJECT	PAGE
CARGO	
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Vehicle Data	50-00-5
Vehicle Identification Number	50-00-4
CL-9000	
General Information	50-00-11
Vehicle Data	50-00-14
L-SERIES	
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LIGHT/MEDIUM/HEAVY	
General Information—Light Truck	50-00-45
General Information—Medium/Heavy Truck	50-00-45
Vehicle Data	50-00-49
VEHICLE APPLICATION	50-00-1

VEHICLE APPLICATION

All Truck Models.

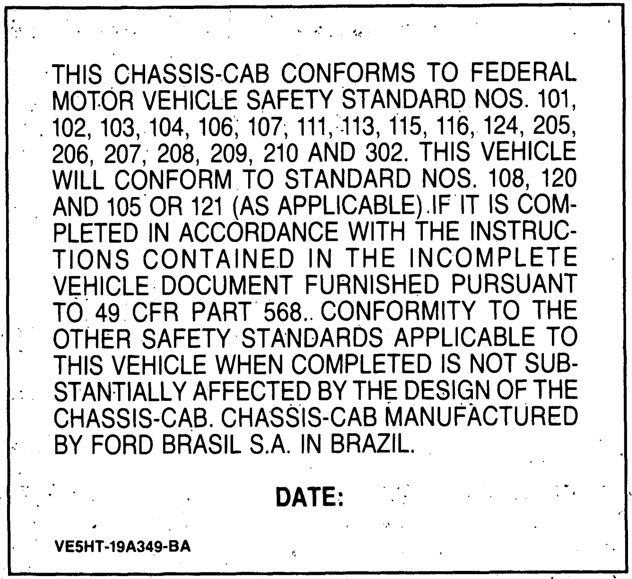
CARGO

General Information

CHASSIS CAB CERTIFICATION LABEL

The Chassis-Cab Certification Label is attached to the rear face of the driver's side door pillar. The label contains the name of the manufacturer, the month and year of manufacture and the certification statement.

CHASSIS CAB CERTIFICATION LABEL



THIS CHASSIS-CAB CONFORMS TO FEDERAL MOTOR VEHICLE SAFETY STANDARD NOS. 101, 102, 103, 104, 106, 107, 111, 113, 115, 116, 124, 205, 206, 207, 208, 209, 210 AND 302. THIS VEHICLE WILL CONFORM TO STANDARD NOS. 108, 120 AND 105 OR 121 (AS APPLICABLE) IF IT IS COMPLETED IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE INCOMPLETE VEHICLE DOCUMENT FURNISHED PURSUANT TO 49 CFR PART 568. CONFORMITY TO THE OTHER SAFETY STANDARDS APPLICABLE TO THIS VEHICLE WHEN COMPLETED IS NOT SUBSTANTIALLY AFFECTED BY THE DESIGN OF THE CHASSIS-CAB. CHASSIS-CAB MANUFACTURED BY FORD BRASIL S.A. IN BRAZIL.

DATE:

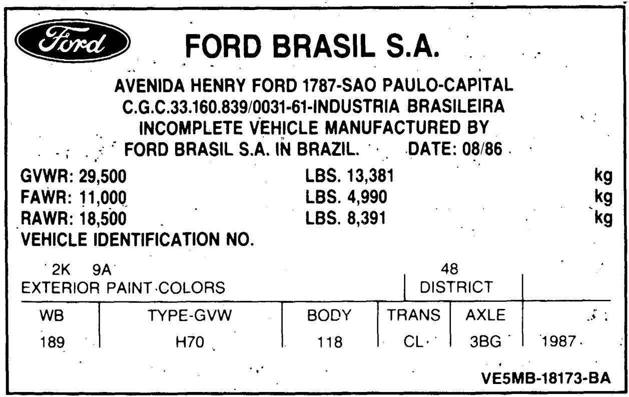
VE5HT-19A349-BA

CY2926-1A

VEHICLE RATING DECAL

The Vehicle Rating Decal contains pertinent information about vehicle type/GVW wheelbase dimension, body, transmission and axle identification. The Rating Decal is attached to the door pillar on the driver's side.

VEHICLE RATING DECAL



FORD BRASIL S.A.

AVENIDA HENRY FORD 1787-SAO PAULO-CAPITAL
C.G.C.33.160.839/0031-61-INDUSTRIA BRASILEIRA
INCOMPLETE VEHICLE MANUFACTURED BY
FORD BRASIL S.A. IN BRAZIL. DATE: 08/86

GVWR: 29,500 LBS. 13,381 kg
FAWR: 11,000 LBS. 4,990 kg
RAWR: 18,500 LBS. 8,391 kg
VEHICLE IDENTIFICATION NO.

2K 9A
EXTERIOR PAINT COLORS

48
DISTRICT

WB	TYPE-GVW	BODY	TRANS	AXLE	
189	H70	118	CL	3BG	1987

VE5MB-18173-BA

CY2927-1B

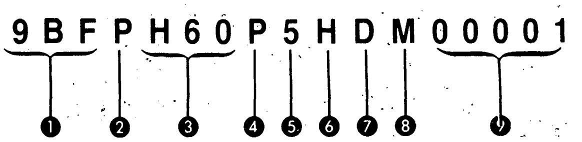
VEHICLE IDENTIFICATION NUMBER (VIN)

By looking at the seventeen digit VIN number a variety of information about the vehicle can be determined. The first three digits identify the manufacturer and the vehicle make and type. The fourth digit determines the type of brake system (air or hydraulic) and the Gross Vehicle Weight Rating (GVWR) Class for Trucks and MPV's (completed vehicles). For incomplete vehicles and buses, the fourth digit determines the brake system. Digits five, six and seven identify the model or line, series, chassis and cab type. The eighth digit points out the particular engine and type (gas or diesel) found in the vehicle.

CARGO (Continued)

Digit nine is the VIN check digit. The tenth digit identifies the model year of a Ford—completed vehicle or the model year of the incomplete vehicle, if sold by Ford as an incomplete vehicle. The eleventh digit determines the assembly plant. Digits twelve through seventeen make up the sequential serial and warranty number. Digit twelve uses the letter "J" until the production or sequence of 99,999 units (digits thirteen through seventeen) is reached. Letter "J" then becomes "K" for the next production sequence of vehicles.

SAMPLE VIN NUMBER



❶ Positions 1, 2 and 3 — Manufacturer, Make and Type (World Manufacturer Identifier)

❷ Position 4 — Brake System GVWR Class for Trucks and MPV's (complete vehicles); Brake System (only) for Incomplete Vehicles and Buses.

❸ Positions 5, 6 and 7 — Model or Line, Series, Chassis, Cab Type.

❹ Position 8 — Engine Type

❺ Position 9 — Check Digit

❻ Position 10 — Model Year (Ford — completed vehicles)

❼ Position 11 — Assembly Plant

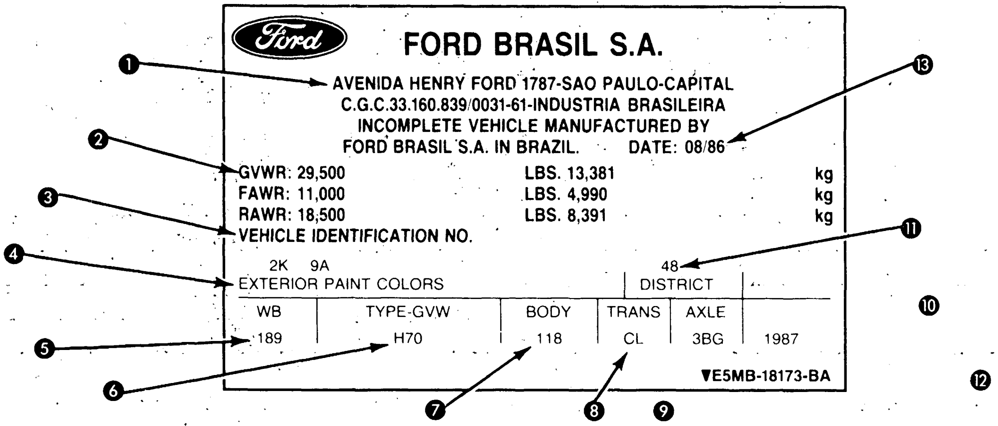
❽ Position 12 — Constant "M" until sequence number of 99,999 is reached, then changes to a constant "N" and so on.

❾ Positions 13 through 17 — Sequence number — begins at 00001

CY2929-2B

VEHICLE DATA

The Vehicle Data appears on the Vehicle Rating Decal on the two lines following the identification number. The code set (two numbers or a number and letter) above COLOR identify the exterior paint color (two sets of codes designate a two-tone). The first three digits under W.B. designate the wheelbase in inches. The letter and three digits under TYPE/GVW designate the truck model within a series and the gross vehicle weight rating. The letters and/or numeral under BODY designate the interior trim, seat and body type. The transmission installed in the vehicle is identified under TRANS by a code of letter(s) and/or number(s). A letter and a number or two numbers under AXLE identify the rear axle ratio (when required; a letter is also stamped after the rear axle code to identify the front axle).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FORD BRASIL S.A.
AVENIDA HENRY FORD 1787-SAO PAULO-CAPITAL
C.G.C.33.160.839/0031-61-INDUSTRIA BRASILEIRA
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2K 9A
EXTERIOR PAINT COLORS

48
DISTRICT

WB	TYPE-GVW	BODY	TRANS	AXLE	
189	H70	118	CL	3BG	1987

E5MB-18173-BA

❶ Name and Location of Manufacturer

❷ Gross Vehicle Weight Rating in Pounds (LB) and Kilograms (KG)

❸ Vehicle Identification Number
  (a) World Manufacturer Identifier
  (b) Brake System and Gross Vehicle Weight Rating (GVWR) Class for Trucks (complete vehicles); Brake System (only) for Incomplete Vehicles
  (c) Model or Line, Series, Chassis and Cab Type
  (d) Engine Type
  (e) Check Digit
  (f) Model Year (Ford — completed vehicles)
  (g) Assembly Plant Code
  (h) Sequential Serial Number

❹ Exterior Paint Codes (Two sets of figures designates a two-tone)

❺ Wheelbase in Inches

❻ Model Code

❼ Interior Trim, Seat and Body/Cab Type

❽ Transmission Code

❾ Rear Axle Code

❿ Front Axle Code

⓫ District/Special Order Codes

⓬ Vehicle Model Year

⓭ Date of Manufacture by Month/Year

CY2930-2B

CARGO (Continued)

Vehicle Identification Number

Refer to the following charts for further explanation of the 17-digit Vehicle Identification Number.

WORLD MANUFACTURER IDENTIFIER (VIN POSITIONS 1, 2 AND 3)

9 B F P H 6 0 P 5 H D M 0 0 0 0 1

VIN Code	Manufacturer	Make	Type
9BF	Ford Brasil, S.A.	Ford	Incomplete Vehicle (Truck)

CY2931-2B

BRAKE SYSTEM AND GVWR CLASS FOR TRUCKS AND MPV'S — BRAKE SYSTEM (ONLY) FOR BUSES AND INCOMPLETE VEHICLES (VIN POSITION 4)

9 B F **P** H 6 0 P 5 H D M 0 0 0 0 1

Brake System	GVWR Class	GVWR Range	VIN Code
Air Over Hydraulic	Class 6	19,501-26,000 pounds	N
Air Over Hydraulic	Class 7	26,001-33,000 pounds	P
Air Over Hydraulic	Class 8	33,001-55,000 pounds	R
Air	Class 6	19,501-26,000 pounds	W
Air	Class 7	26,001-33,000 pounds	X
Air	Class 8	33,001-55,000 pounds	Y

CY2932-2B

MODEL OR LINE, SERIES, CHASSIS, CAB TYPE (VIN POSITIONS 5, 6 AND 7)

9BFP **H60** P5HDM00001

VIN Code	Description
H60	CF6000
H70	CF7000
H81	CF8000

CY2933-2B

ENGINE TYPE, DISPLACEMENT, CYLINDERS, FUEL TYPE, AND MANUFACTURER (VIN POSITION 8)

9 B F P H 6 0 **P** 5 H D M 0 0 0 0 1

Type	VIN Code	Displacement		Cylinders	Fuel Metering	Manufacturer	Net Brake Horsepower
		Liter	CID				
Diesel	P	6.6	403	I-6	Turbo Diesel	Ford Brasil S.A.	160-170
Diesel	A	7.8	474	I-6	Turbo Diesel	Ford Brasil S.A.	170-250

CY2934-2B

CARGO (Continued)

CHECK DIGIT FOR ALL VEHICLES (VIN POSITION 9)

$\mathrm{9BFPH60P}\,\boxed{\mathrm{5}}\,\mathrm{HDM00001}$

CY2935-1B

VEHICLE MODEL YEAR (FORD-COMPLETED VEHICLES) (VIN POSITION 10)

$\mathrm{9BFPH60P5}\,\boxed{\mathrm{H}}\,\mathrm{DM00001}$

VIN Code	Year
G	1986
H	1987
J	1988
K	1989
L	1990

CY2936-1B

ASSEMBLY PLANT (VIN POSITION 11)

$\mathrm{9BFPH60P5H}\,\boxed{\mathrm{D}}\,\mathrm{M00001}$

VIN Code	Assembly Plant
D	Ipiranga (Brasil)

CY2937-1B

PRODUCTION SEQUENCE NUMBER (VIN POSITIONS 12 THROUGH 17)

$\mathrm{9BFPH60P5HD}\,\boxed{\mathrm{M00001}}$

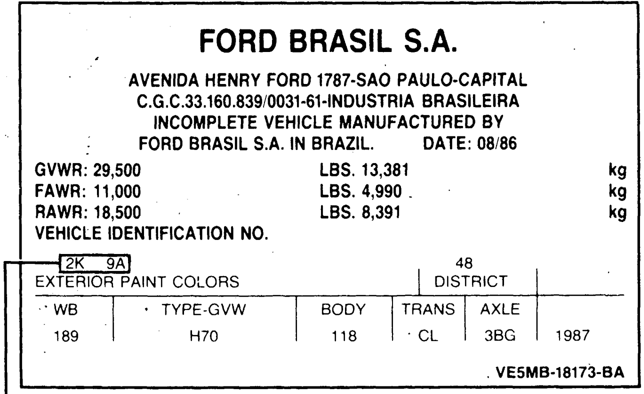
SEQUENCE NUMBER
M00001 — M99999 and so on.

CY2938-1B

Vehicle Data

Refer to the following charts for futher explanation of the Vehicle Rating Decal.

Exterior Paint Color Codes



FORD BRASIL S.A.

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EXTERIOR PAINT COLORS

48
DISTRICT

WB	TYPE-GVW	BODY	TRANS	AXLE	
189	H70	118	CL	3BG	1987

VE5MB-18173-BA

(1986)

EXTERIOR PAINT	
Code	**Color**
	Non-Metallic
1C	Raven Black
2K	Candyapple Red
3T	Bahama Blue
6M	Omaha Orange
6S	Chrome Yellow
7D	Holly Green
94	Diamond White
9A	Wimbledon White
	Metallic
4R	Light Green
8P	Light Desert
9V	Light Charcoal
9Y	Medium Walnut

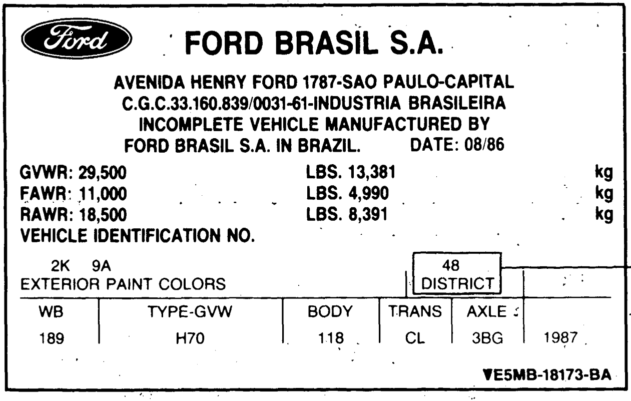
(1987)

Code	Color
1C	Raven Black
1D	Smoke Metallic
1E	Silver Metallic
2K	Candyapple Red
3T	Bahama Blue
8Q	Light Desert Tan
9Y	Walnut Metallic
94	Diamond White

CY2939-1B

CARGO (Continued)

District Sales Office Codes



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2K 9A
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48
DISTRICT

WB	TYPE-GVW	BODY	TRANS	AXLE	
189	H70	118	CL	3BG	1987

▼E5MB-18173-BA

DSO — FSO — PTO (DOMESTIC, FOREIGN AND SPECIAL ORDER)

The D.S.O. space will show a two-digit code number of the district which ordered the unit (see chart below). This code will appear on all units — domestic or export. If unit is built on a D.S.O., E.S.O., P.T.O. (special orders), the complete order number is under the D.S.O. space **after** the district code.

Code	District
11	Boston
12	Buffalo
13	New York
14	Pittsburgh
16	Philadelphia
17	Washington
21	Atlanta
22	Charlotte
23	Memphis
24	Jacksonville
26	New Orleans
28	Louisville
41	Chicago
42	Cleveland
43	Milwaukee
46	Indianapolis
47	Cincinnati
48	Detroit

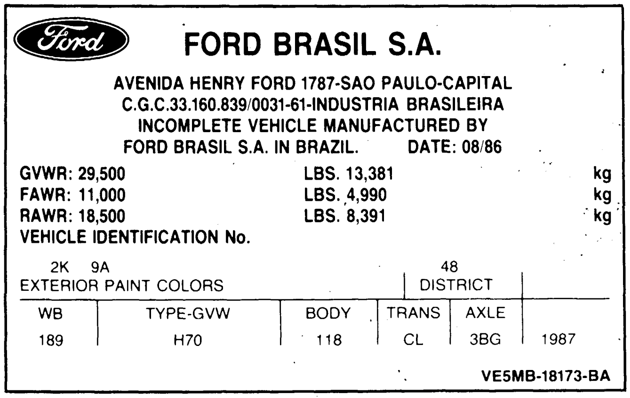
Code	District
52	Dallas
53	Kansas City
54	Omaha
55	St. Louis
57	Houston
58	Twin Cities
71	Los Angeles
72	San Jose
74	Seattle
75	Phoenix
76	Denver
83	Government
84	Home Office Reserve
85	American Red Cross
86	Recreation Vehicles
87	Body Company
89	Transportation Services
90's	Export
00	Special

Ford of Canada
Ford Regions B1 Central B2 Eastern B3 Atlantic B4 Midwestern B6 Western B7 Pacific B8 Great Lakes I1 Export

CY2940-2B

CARGO (Continued)

Wheelbase Codes



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2K 9A	48

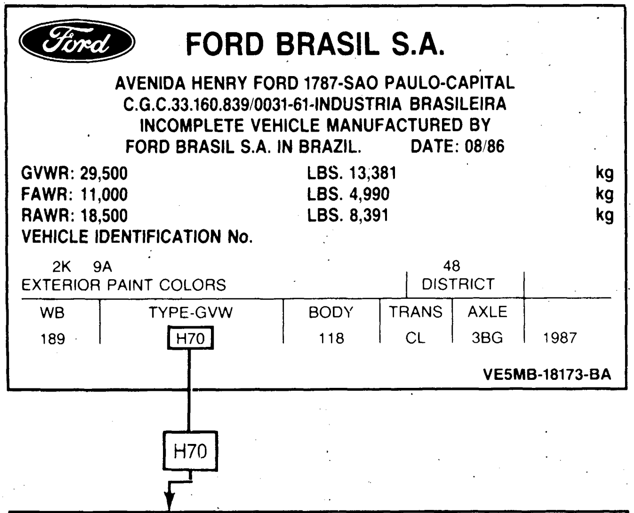
WB	TYPE-GVW	BODY	TRANS	AXLE	
189	H70	118	CL	3BG	1987

VE5MB-18173-BA

Wheelbase	(Inches)
CF6000	153
CF7000	171
CF8000	189

CY2941-1B

Type/Gross Vehicle Weight Codes



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2K 9A	48

WB	TYPE-GVW	BODY	TRANS	AXLE	
189	H70	118	CL	3BG	1987

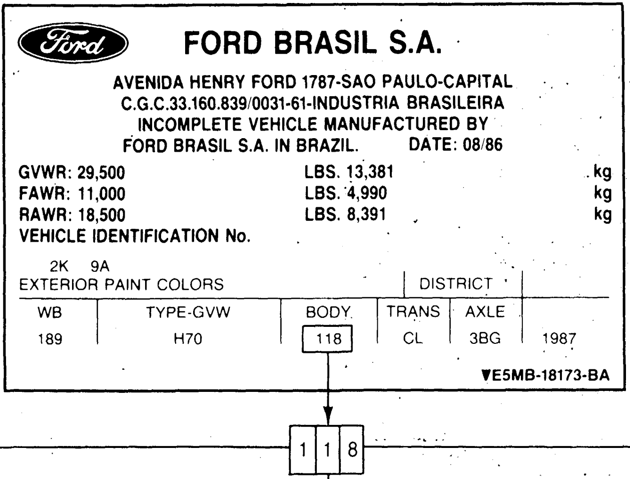
VE5MB-18173-BA

Series	Code	GVWR Lbs. Standard	GVWR Lbs. Maximum	Vehicle Shipping Weight Lbs.
CF6000	H60	26,500	26,500	9,800
CF7000	H70	29,500	29,500	10,300
CF8000	H81	—	—	—

CY2942-1B

CARGO (Continued)

Body Codes



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2K 9A
EXTERIOR PAINT COLORS | DISTRICT

WB	TYPE-GVW	BODY	TRANS	AXLE	
189	H70	118	CL	3BG	1987

▼E5MB-18173-BA

SEAT TRIM AND STYLE

CF6000/CF7000/CF8000	Code
Std. Black Cloth With Red Laser Stripe	1
All Black Vinyl Bucket (Opt)	2

CAB/BODY STYLE

Style	Code
CF6000/CF7000/CF8000	8

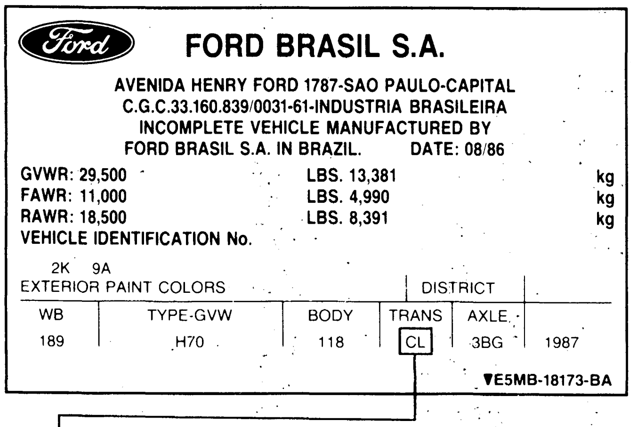
TRIM COLOR

Color	Code
Black With Red Laser Stripe (Std)	1
Black Vinyl (Opt)	2

CY2943-2B

CARGO (Continued)

Transmission Codes



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2K 9A
EXTERIOR PAINT COLORS | DISTRICT

WB	TYPE-GVW	BODY	TRANS	AXLE	
189	H70	118	CL	3BG	1987

▼E5MB-18173-BA

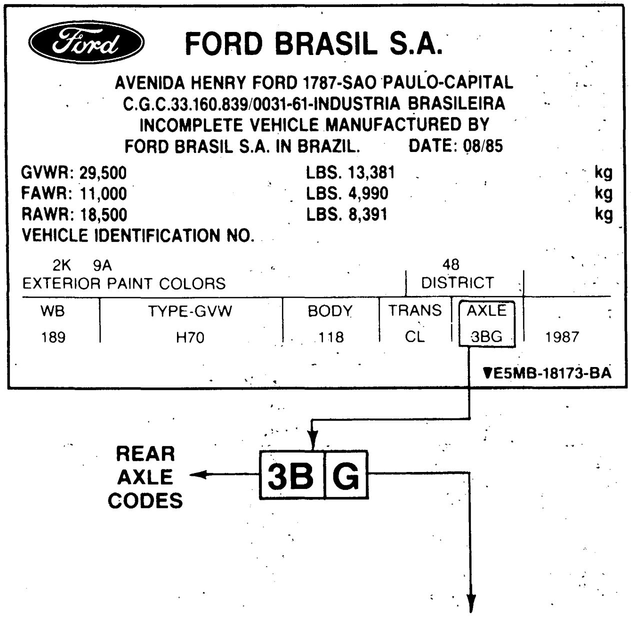
TRANSMISSION CODES

CODE	DESCRIPTION
CL	Clark CL450 5-speed Manual (1)
CM	Clark CL455 5-speed Manual (2)
AA	Allison AT545 4-speed Automatic
CJ	Clark CL551 5-speed Manual (3)
CK	Clark CL557 5-speed Manual (3)
CH	Clark CL558 5-speed Manual (3)

(1) Wide Ratio. (2) Soft Fourth. (3) Available for California Vehicles Only.

CY2944-1B

Axle Codes (Front)



FORD BRASIL S.A.

AVENIDA HENRY FORD 1787-SAO PAULO-CAPITAL
C.G.C.33.160.839/0031-61-INDUSTRIA BRASILEIRA
INCOMPLETE VEHICLE MANUFACTURED BY
FORD BRASIL S.A. IN BRAZIL. DATE: 08/85

GVWR: 29,500 LBS. 13,381 kg
FAWR: 11,000 LBS. 4,990 kg
RAWR: 18,500 LBS. 8,391 kg
VEHICLE IDENTIFICATION NO.

2K 9A 48
EXTERIOR PAINT COLORS | DISTRICT

WB	TYPE-GVW	BODY	TRANS	AXLE	
189	H70	118	CL	3BG	1987

▼E5MB-18173-BA

FRONT AXLE CODES AND DESCRIPTION

CF 6000	
Code	**Description**
N	9,000 Lb. Steel
P	12,000 Lb. Steel

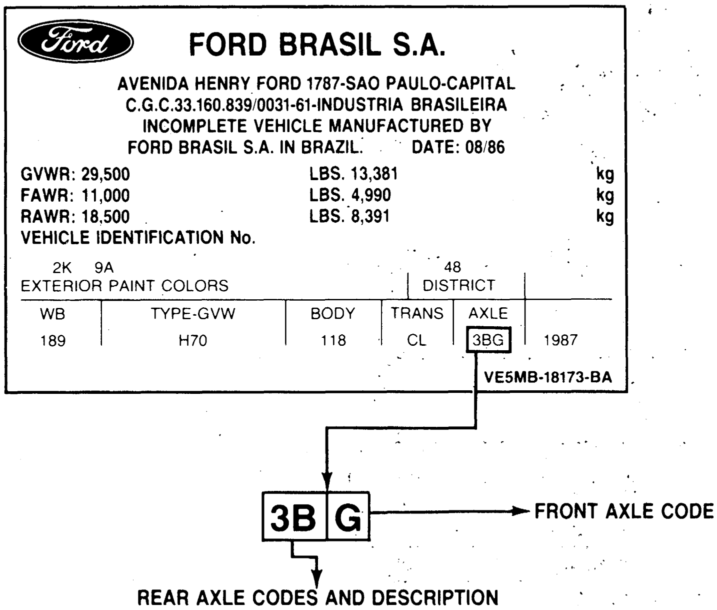
CF 7000	
Code	**Description**
G	12,000 Lb. Steel①

Note: ①With greasable drag link and tie rod.

CY2945-1B

CARGO (Continued)

Axle Codes (Rear)



FORD BRASIL S.A.

AVENIDA HENRY FORD 1787-SAO PAULO-CAPITAL
C.G.C.33.160.839/0031-61-INDUSTRIA BRASILEIRA
INCOMPLETE VEHICLE MANUFACTURED BY
FORD BRASIL S.A. IN BRAZIL. DATE: 08/86

GVWR: 29,500 LBS. 13,381 kg
FAWR: 11,000 LBS. 4,990 kg
RAWR: 18,500 LBS. 8,391 kg
VEHICLE IDENTIFICATION No.

2K 9A
EXTERIOR PAINT COLORS

48
DISTRICT

WB	TYPE-GVW	BODY	TRANS	AXLE	
189	H70	118	CL	3BG	1987

VE5MB-18173-BA

1986 REAR AXLE CODES AND DESCRIPTION

CF6000		
Code	**Description**	**Ratio**
UE	Rockwell H-173, 17,500 Lb. Single Speed	4.88
4G	RS-20-230, 17,500 Lb. Two Speed	4.88/6.80

CF7000		
Code	**Description**	**Ratio**
29	Rockwell P-174, 19,000 Lb. Single Speed	4.88
3B	RS-20-230, 19,000 Lb. Two Speed	4.88/6.80

1987 REAR AXLE CODES AND DESCRIPTION

CF6000		
Code	**Description**	**Ratio**
53	Rockwell RS-17-140 17,500 Lb. Single Speed	4.56
W7	Rockwell RS-17-220 17,500 Lb. Two Speed	4.56/6.36

CF7000		
Code	**Description**	**Ratio**
2G	Rockwell RS-20-145 20,000 Lb. Single Speed	4.56
2H	Rockwell RS-20-145 20,000 Lb. Single-Speed	4.88
3G	Rockwell RS-20-130 20,000 Lb. Two-Speed	4.56/6.36
3H	Rockwell RS-20-230 20,000 Lb. Two-Speed	4.88/6.80

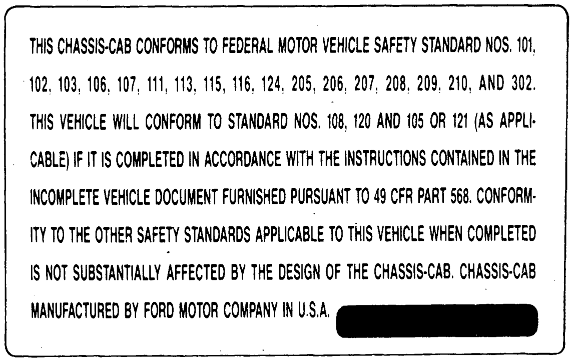
CY2946-2B

CL-9000

General Information

CHASSIS-CAB CERTIFICATION LABEL

The Chassis-Cab Certification Label is attached to the door pillar. The label contains the name of the manufacturer, the month and year of manufacture and the certification statement.



THIS CHASSIS-CAB CONFORMS TO FEDERAL MOTOR VEHICLE SAFETY STANDARD NOS. 101, 102, 103, 106, 107, 111, 113, 115, 116, 124, 205, 206, 207, 208, 209, 210, AND 302. THIS VEHICLE WILL CONFORM TO STANDARD NOS. 108, 120 AND 105 OR 121 (AS APPLICABLE) IF IT IS COMPLETED IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE INCOMPLETE VEHICLE DOCUMENT FURNISHED PURSUANT TO 49 CFR PART 568. CONFORMITY TO THE OTHER SAFETY STANDARDS APPLICABLE TO THIS VEHICLE WHEN COMPLETED IS NOT SUBSTANTIALLY AFFECTED BY THE DESIGN OF THE CHASSIS-CAB. CHASSIS-CAB MANUFACTURED BY FORD MOTOR COMPANY IN U.S.A. [redacted]

A10416-1A

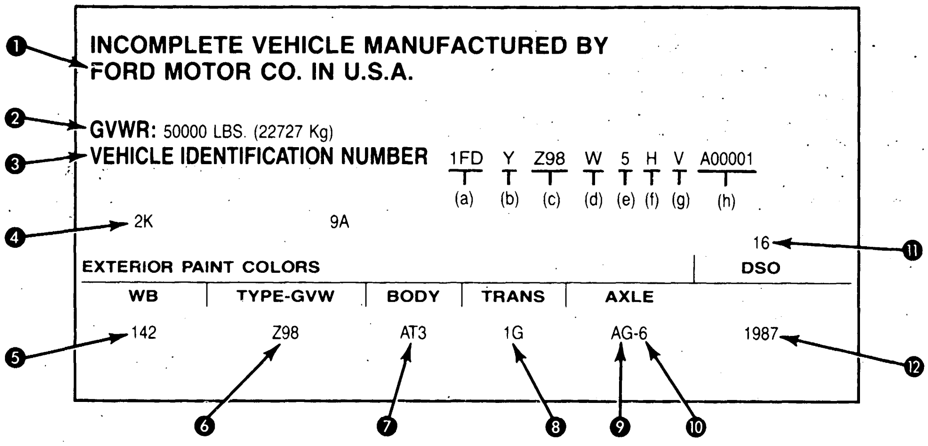
VEHICLE IDENTIFICATION NUMBER (VIN)

A seventeen digit combination of numbers and letters form the Vehicle Identification Number (VIN). The VIN is located in the center area of the Vehicle Rating Decal.

By looking at the seventeen digit VIN number a variety of information about the vehicle can be determined. The first three digits identify the manufacturer and the vehicle make and type. The fourth digit determines the type of brake system (air) and the Gross Vehicle Weight Rating (GVWR) Class for Trucks (completed vehicles). For incomplete vehicles, the fourth digit determines the brake system (air) only. Digits five, six and seven identify the model or line, series, chassis and cab type. The eighth digit points out the particular engine and type (gas or diesel) found in the vehicle. Digit nine is the VIN check digit. The tenth digit identifies the model year of a Ford-completed vehicle, or the model year of the incomplete vehicle, if sold by Ford as an incomplete vehicle. The eleventh digit determines the assembly plant. Digits twelve through seventeen make up the sequential serial and warranty number. Digit twelve uses the letter "A" until the production or sequence of 99,999 units (digits thirteen through seventeen) is reached. Letter "A" then becomes "B" for the next production sequence of vehicles.

Refer to code definition portion of this Section for specific definitions of the numbers and letters of the Vehicle Identification Number (VIN).

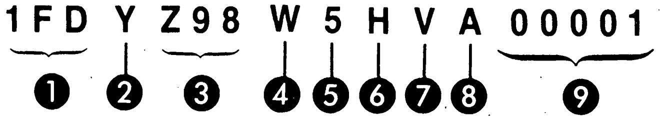
CL-9000 (Continued)


INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.
GVWR: 50000 LBS. (22727 Kg)
VEHICLE IDENTIFICATION NUMBER 1FD Y Z98 W 5 H V A00001
(a) (b) (c) (d) (e) (f) (g) (h)
2K 9A
16
EXTERIOR PAINT COLORS
DSO
WB
TYPE-GVW
BODY
TRANS
AXLE
142
Z98
AT3
1G
AG-6
1987
1
2
3
4
5
6
7
8
9
10
11
12

- ❶ Name and Location of Manufacturer
- ❷ Gross Vehicle Weight Rating in Pounds (Lb) and Kilograms (Kg)
- ❸ Vehicle Identification Number
  - (a) World Manufacturer Identifier
  - (b) Brake System and Gross Vehicle Weight Rating (GVWR) Class for Trucks (complete vehicles); Brake System (only) for Incomplete Vehicles
  - (c) Model or Line, Series, Chassis and Cab Type
  - (d) Engine Type
  - (e) Check Digit
  - (f) Model Year (Ford — completed vehicles)
  - (g) Assembly Plant Code
  - (h) Sequential Serial and Warranty Number
- ❹ Exterior Paint Codes (Two sets of figures designates a two-tone)
- ❺ Wheelbase in Inches
- ❻ Model Code and GVW
- ❼ Interior Trim, Seat and Body/Cab Type
- ❽ Transmission Code
- ❾ Rear Axle Code
- ❿ Front Axle Code
- ⓫ District/Special Order Codes
- ⓬ Vehicle Model Year

CY2428-2F

SAMPLE VIN NUMBER



- ❶ Position 1, 2, and 3 — Manufacturer, Make and Type (World Manufacturer Identifier)
- ❷ Position 4 — Brake System GVWR Class for Trucks (completed vehicles); Brake System (only) for incomplete vehicles.
- ❸ Position 5, 6, and 7 — Model or Line, Series, Chassis, Cab Type
- ❹ Position 8 — Engine Type
- ❺ Position 9 — Check Digit
- ❻ Position 10 — Model Year (Ford — completed vehicles)
- ❼ Position 11 — Assembly Plant
- ❽ Position 12 — Constant "A" until sequence number of 99,999 is reached, then changes to a constant "B" and so on.
- ❾ Position 13 through 17 — Sequence number — begins at 00001

CY2429-2F

WORLD MANUFACTURER IDENTIFIER
(VIN POSITIONS 1, 2 AND 3)

1 F D YZ98W5HVA00001

VIN Code	Vehicle Manufacturer	Make	Type
1 F T	Ford Motor Company, USA	Ford	Truck (Complete Vehicle)
1 F D	Ford Motor Company, USA	Ford	Incomplete Vehicle (IV)
2 F T	Ford Motor Company of Canada, Ltd.	Ford	Truck (Complete Vehicle)
2 F D	Ford Motor Company of Canada, Ltd.	Ford	Incomplete Vehicle

CY2430-2F

CL-9000 (Continued)

BRAKE SYSTEM AND GVWR CLASS FOR TRUCKS — BRAKE SYSTEM (ONLY) FOR INCOMPLETE VEHICLES (VIN POSITION 4)

1FD $\boxed{\text{Y}}$ Z98W5HVA00001

Brake System	GVWR Class	GVWR Range	VIN Code
Air	Class 3	10,001-14,000 pounds	T
Air	Class 4	14,001-16,000 pounds	U
Air	Class 5	16,001-19,500 pounds	V
Air	Class 6	19,501-26,000 pounds	W
Air	Class 7	26,001-33,000 pounds	X
Air	Class 8	33,001-55,000 pounds	Y
		55,000 pounds and over	Z

CY2651-2D

ENGINE TYPE, DISPLACEMENT, CYLINDERS, FUEL TYPE, AND MANUFACTURER (VIN POSITION 8)

1FDYZ98 $\boxed{\text{W}}$ 5HVA00001

DIESEL ENGINES

VIN Code	Displacement		Cylinders	Basic Model No.	Manufacturer
	Liter	CID			
L	10.0	611	I-6	L-10	Cummins
W	14.0	855	I-6	NTC	Cummins
X	14.6	893	I-6	3406 B	Caterpillar

Delete Engine

0 (Zero) DSO Glider. Delete Engine on motor vehicle equipment only.

CY2652-2D

MODEL OR LINE, SERIES, CHASSIS, CAB TYPE — 1985-1986 (VIN POSITIONS 5, 6 AND 7)

1FDY $\boxed{\text{Z98}}$ W5HV A00001

VIN Code	Description
X91	CLT-9000, 110″ Sleeper Cab, Diesel
X96	CLT-9000, 64″ Chassis Cab, Diesel
X98	CLT-9000, 88″ Sleeper Cab, Diesel
Z96	CL-9000, 64″ Chassis Cab, Diesel
Z98	CL-9000, 88″ Sleeper Cab, Diesel

CY2783-1C

VEHICLE MODEL YEAR FOR ALL VEHICLES (VIN POSITION 10)

1FDYZ98W5 $\boxed{\text{H}}$ VA00001

VIN Code	Year
H	1987
J	1988
K	1989
L	1990

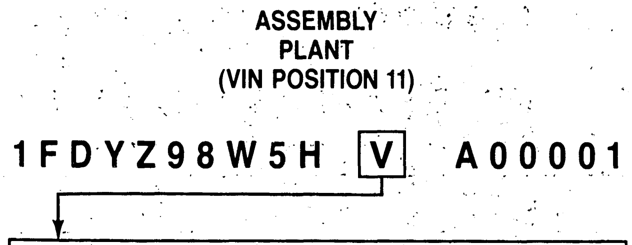
CY2435-1F

CHECK DIGIT FOR ALL VEHICLES (VIN POSITION 9)

1FDYZ98W $\boxed{\text{5}}$ HVA00001

CY2434-1F

CL-9000 (Continued)


ASSEMBLY PLANT (VIN POSITION 11)
1 F D Y Z 9 8 W 5 H V A 0 0 0 0 1

VIN Code	Assembly Plant
V	Kentucky Truck (Jefferson County, Kentucky)

CY2436-1F

Vehicle Data

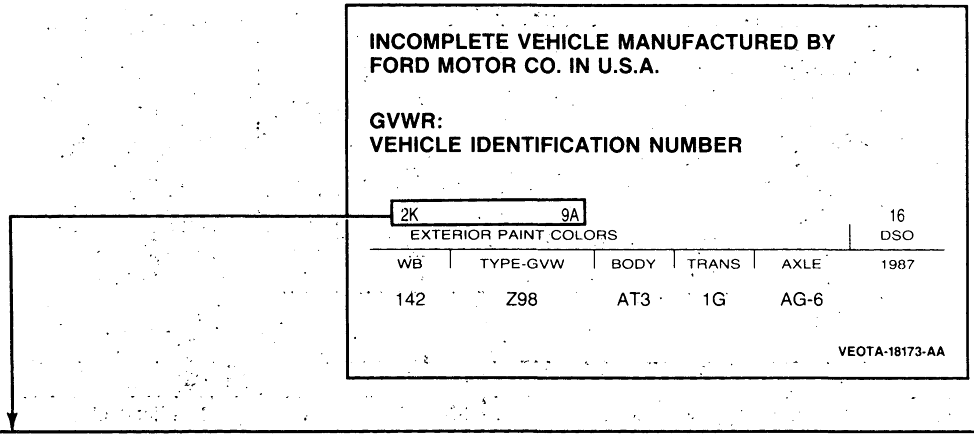
The Vehicle Data appears on the Vehicle Rating Decal on the two lines following the identification number. The code set (two numbers or a number and letter) above COLOR identify the exterior paint color (two sets of codes designate a two-tone). The first three digits under W.B. designate the wheelbase in inches. The letter and three digits under TYPE/G.V.W. designate the truck model within a series and the gross vehicle weight rating. The letters and/or numeral under BODY designate the interior trim, seat and body type. The transmission installed in the vehicle is identified under TRANS by an alphabetical code (if two symbols appear, the first identifies the auxiliary transmission, if so equipped, and the second symbol identifies the main transmission). A letter and a number or two numbers under AXLE identify the rear axle ratio (when required, a letter is also stamped after the rear axle code to identify the front axle).

A two-digit number is stamped above D.S.O. to identify the district which ordered the vehicle. If the vehicle is built to special order (Domestic Special Order, Foreign Special Order, Limited Production Option, or other special order), the complete order number will also appear above D.S.O. The vehicle model year appears in the lower right corner area of the decal under D.S.O.

The charts that follow list the various vehicle data codes.

CL-9000 (Continued)

EXTERIOR PAINT COLOR CODES
CL-, CLT-9000



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER

2K 9A EXTERIOR PAINT COLORS					16 DSO
WB	TYPE-GVW	BODY	TRANS	AXLE	1987
142	Z98	AT3	1G	AG-6	

VEOTA-18173-AA

NOTE — TWO SETS OF CODES INDICATES TWO-TONE PAINT

CONVENTIONAL COLORS

Code	Color	Code	Color
1C	Raven Black	6N	Bright Yellow
1D	Smoke Metallic	67	Yellow
1G	Light Smoke Metallic	7D	Holly Green
2K	Candyapple Red	9A	Wimbledon White
2L	Maroon	9E	Pure White
22	Rangoon Red	9T	Light Chestnut
3L	Midnight Blue Metallic	9Y	Walnut Metallic
3T	Bahama Blue	99	Prime

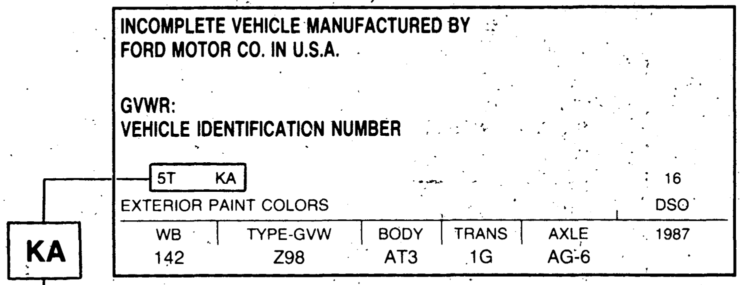
CLEAR COAT COLORS

Code	Color	Code	Color
1L	Crystal Opalescent	3S	Bright Dark Blue Metallic
1Q	Silver Metallic	5N	Pastel Regatta Blue Metallic
1R	Black	54	Light Chestnut Metallic
1S	Black/Bronze Opalescent	6E	Bright Caramel Metallic
1Z	Medium Charcoal Metallic	7Q	Wheat Metallic
2M	Medium Canyon Red Metallic	9K	Shadow Blue Metallic
2V	Bright Red	9S	White
3N			Walnut Metallic

CY2975-2A

CL-9000 (Continued)

MULTI-TONE PAINT COLOR COMBINATIONS AND TRIM AVAILABILITY CL-, CLT-SERIES



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER

5T KA					16
EXTERIOR PAINT COLORS					DSO
WB	TYPE-GVW	BODY	TRANS	AXLE	1987
142	Z98	AT3	1G	AG-6	

Color Combination Code	KA	KE	KF	KG
Cab Colors Areas A B C	Light Chestnut Metallic Walnut Metallic White	Silver Metallic Med. Canyon Red Met. Med. Charcoal Metallic	Silver Metallic Black Med. Charcoal Metallic	Silver Metallic Med. Charcoal Metallic Bright Red
Chassis Color†	Walnut Metallic	Canyon Red Metallic	Med. Gray Metallic	Med. Gray Metallic
Interior Trim — Base	Charcoal	Charcoal	Charcoal	Charcoal
Intermediate	Chestnut	Chestnut	Chestnut	Chestnut
High Level	Chestnut	Charcoal	Charcoal	Charcoal

Color Combination Code	◆KR	◆KS	◆KT	◆KU
Cab Colors Areas A B C	Brt. Caramel Metallic Walnut Metallic White	Pastel Regatta Blue Met. Shadow Blue Metallic Brt. Dark Blue Metallic	Black/Bronze Opalescent Black/Bronze Opalescent Wheat Metallic	Crystal Opalescent Black/Bronze Opalescent Wheat Metallic
Chassis Color†	Walnut Metallic	Midnight Blue Met.	Black	Midnight Blue Met.
Interior Trim — Base	Charcoal	Charcoal	Charcoal	Charcoal
Intermediate	Chestnut	Chestnut	Chestnut	Chestnut
High Level	Chestnut	Charcoal	Charcoal or Chestnut	Charcoal

Color Combination Code	◆KV	KW	KY*	
Cab Colors Areas A B C	Brt. Dark Blue Metallic Shadow Blue Metallic Silver Metallic	Med. Charcoal Metallic Black Brt. Caramel Metallic	PTO PTO PTO	
Chassis Color†	Midnight Blue Met.	Black	PTO	
Interior Trim — Base	Charcoal	Charcoal	Charcoal	
Intermediate	Chestnut	Chestnut	◆Chestnut	
High Level	Charcoal	Charcoal	Charcoal	

*For PTO Color Combination (Code KY) Available in Clear Coat Glamour Colors Only

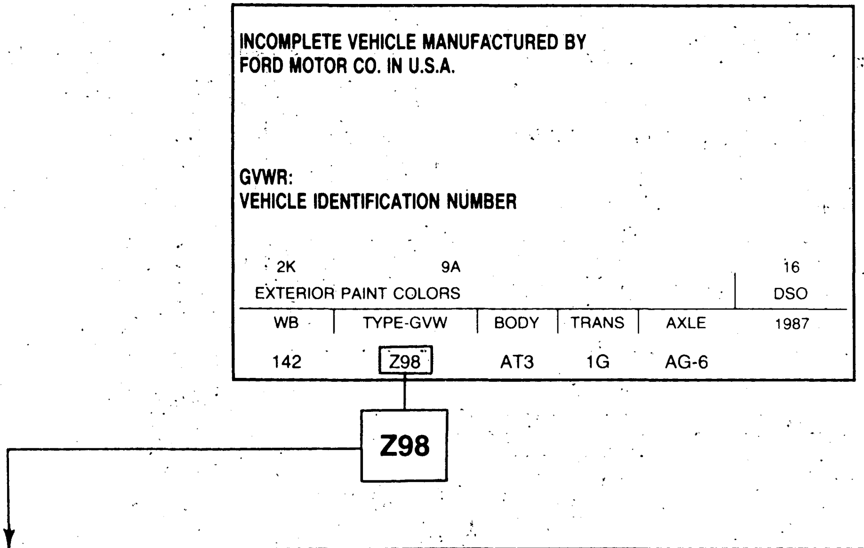
"Z" STRIPE COLOR COMBINATIONS

Color Combination Code	FP	FS
Cab Colors Areas A B	Walnut Met. Brt. Caramel Met.	Black Med. Charcoal Met.
Chassis Color	Walnut Met.	Black
Tape Color	Brt. Caramel/ Pastel Chamois	Brt. Dk. Blue Met./ Silver Met.
Interior Trim — Base	Charcoal	Charcoal
Intermediate	Chestnut	Chestnut
High Level	Chestnut	Charcoal

CY2909-2B

CL-9000 (Continued)

TYPE — GROSS VEHICLE WEIGHT (GVW) CODES
CL-, CLT-9000



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER

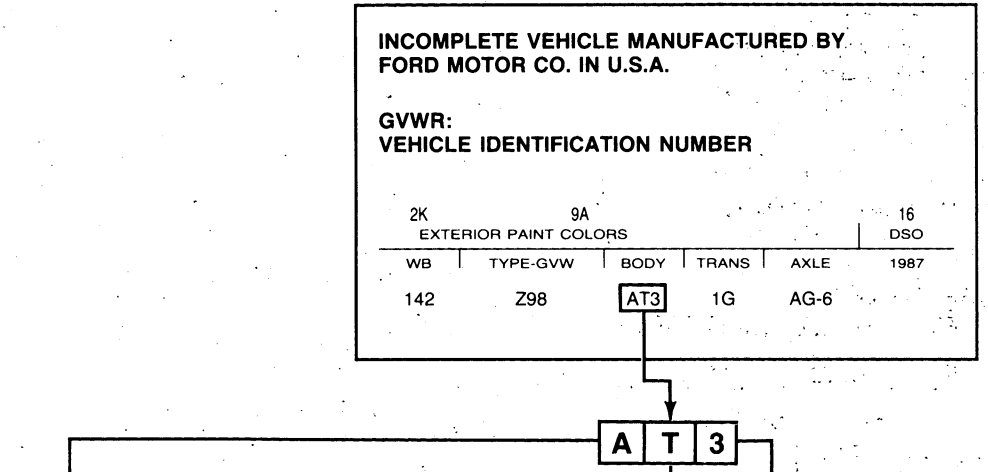
2K		9A			16
EXTERIOR PAINT COLORS					DSO
WB	TYPE-GVW	BODY	TRANS	AXLE	1987
142	Z98	AT3	1G	AG-6	

Code	Series	GVWR Lb.		Vehicle Shipping Weight Lb.
		Standard	Maximum	
Z96	CL-9000	35,000	35,000	11,150
Z98	CL-9000	35,000	35,000	11,150
X91	CLT-9000	46,000	51,100	14,400
X96	CLT-9000	46,000	51,100	14,400
X98	CLT-9000	46,000	51,100	14,400

CY2910-2B

CL-9000 (Continued)

BODY CODES
CL-, CLT-9000



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER

2K	9A				16
EXTERIOR PAINT COLORS					DSO
WB	TYPE-GVW	BODY	TRANS	AXLE	1987
142	Z98	AT3	1G	AG-6	

TRIM SCHEME

Code	Trim Scheme
A	Wheaton Polyknit and Vinyl Bucket (Intermediate)
F	Wheaton Polyknit and Vinyl Bucket (Hi-Level)
N	Biscay Knitted Vinyl and Vinyl Bucket (Base)

CAB/BODY STYLE

Code	Cab/Body Style
1	Sleeper Cab with Foam Mattress
3	Sleeper Cab with Spring Mattress
A	Sleeper Cab with Foam Mattress Exterior Package "C"
C	Sleeper Cab with Spring Mattress Exterior Package "C"
H	Chassis-Cab with Exterior Package "C"

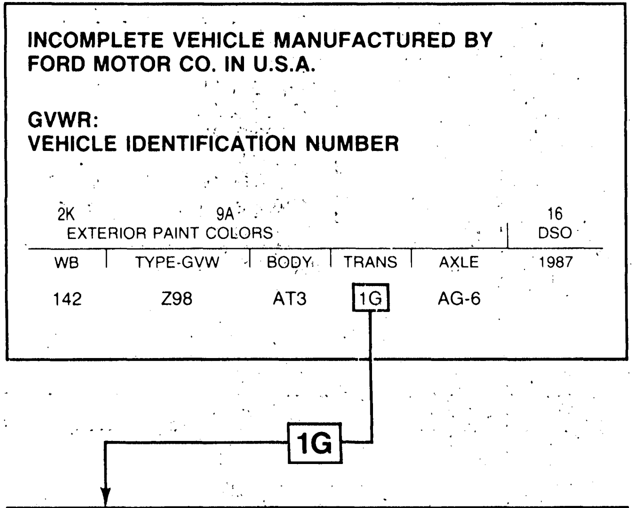
TRIM COLOR

Code	Trim Color
A	Black/Charcoal
L	Chestnut/Tan
K	Chestnut
1	Black w/Red Laser Stripe

CY2785-2C

CL-9000 (Continued)

TRANSMISSION CODES
CL-, CLT-9000



INCOMPLETE VEHICLE MANUFACTURED BY FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER

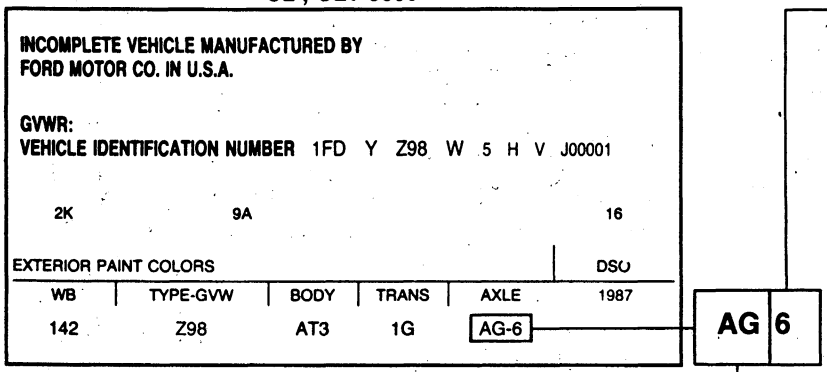
EXTERIOR PAINT COLORS					DSO
2K	9A				16
WB	TYPE-GVW	BODY	TRANS	AXLE	1987
142	Z98	AT3	1G	AG-6	

Code	Transmission
EB	Fuller — 10 Speed RT-11610
EH	Fuller — 10 Speed RT-14610
EC	Fuller — 13 Speed RTO-11613
EJ	Fuller — 13 Speed RTO-14613
BQ	Spicer — 7 Speed 1372-A
FE	Fuller — 9 Speed RT-11609-A
EG	Fuller — 9 Speed RT-14609-A
EA	Fuller — 8 Speed RT-11608
EE	Fuller — 8 Speed RT-14608

CY2786-1C

CL-9000 (Continued)

AXLE CODES
CL-, CLT 9000



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y Z98 W 5 H V J00001

2K 9A 16

EXTERIOR PAINT COLORS					DSO
WB	TYPE-GVW	BODY	TRANS	AXLE	1987
142	Z98	AT3	1G	AG-6	

FRONT AXLE CODE

Code	Axle	Strg.
5	12,000 lb. Steel	Power
6	12,000 lb Steel	Manual
C	13,100 lb. Steel	Power*
E	12,000 lb. Alum.	Power
F	12,000 lb. Alum.	Manual
G	12,000 lb. Steel	Power*
I	12,000 lb. Alum.	Power*
X	12,000 lb. Steel	Manual*
Z	12,000 lb. Alum.	Manual*

*With greaseable drag link and tie rods.

SINGLE REAR AXLE CODES

Rear Axle Code	Axle Ratio	Model	Axle Type
8A	3.70:1	R-170	23,000 LBS. ROCKWELL SINGLE-SPEED, SINGLE REDUCTION AXLE
9A	3.90:1		
1A	4.11:1		
2A	4.33:1		
3T*	3.70:1	R-170	
1T*	4.11:1		
2T*	4.33:1		
GG	3.70:1	23121	23,000 LBS. EATON SINGLE-SPEED, SINGLE REDUCTION AXLE
JG	3.90:1		
AG	4.11:1		
BG	4.33:1		

*Aluminum Carrier Housing

TANDEM REAR AXLE CODES

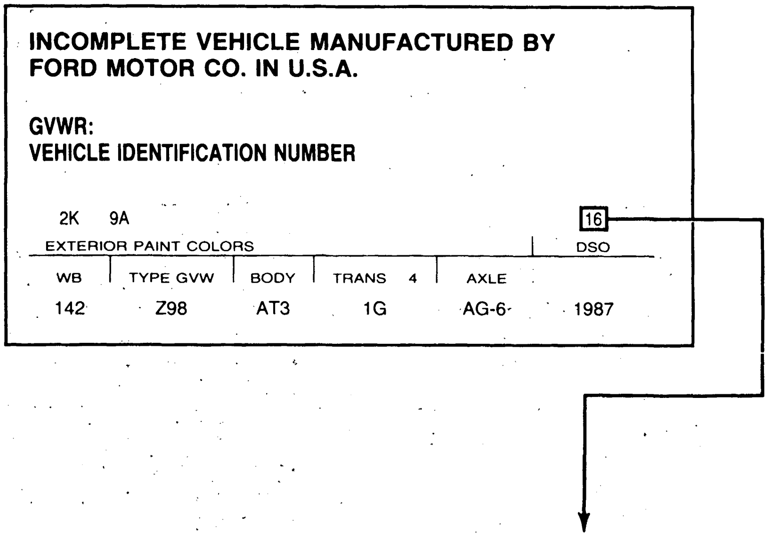
Code	Description	Ratio	Code	Description	Ratio
3C	Eaton DS-341	3.70	D3	Rockwell SQ-100*	3.73
4C	Eaton DS-341	3.90	D5	Rockwell SQ-100*	4.10
1C	Eaton DS-341	4.11			
2C	Eaton DS-341	4.33	YR	Rockwell SQ-100P	3.55
			YQ	Rockwell SQ-100P	3.73
81	Eaton DS-402	3.70	YU	Rockwell SQ-100P	3.90
82	Eaton DS-402	3.90	YV	Rockwell SQ-100P	4.10
83	Eaton DS-402	4.11	YS	Rockwell SQ-100P	4.33
86	Eaton DS-402	4.33	YM	Rockwell SQ-100P	4.63
			YT	Rockwell SQ-100P	4.88
91	Rockwell SL-100	3.73	YW	Rockwell SQ-100P	5.29
WL	Rockwell SL-100	3.90	YN	Rockwell SQ-100P	5.86
92	Rockwell SL-100	4.10			
WN	Rockwell SL-100	4.33	8F	Rockwell SQ-100P*	3.73
			8J	Rockwell SQ-100P*	4.10
B2	Rockwell SQ-100	3.55			
B3	Rockwell SQ-100	3.73	7J	Rockwell SSHD	3.91
B4	Rockwell SQ-100	3.90	7K	Rockwell SSHD	4.10
B5	Rockwell SQ-100	4.10	7M	Rockwell SSHD	4.30
B6	Rockwell SQ-100	4.33	7Q	Rockwell SSHD	4.56
B8	Rockwell SQ-100	4.63			
B9	Rockwell SQ-100	4.88			
BA	Rockwell SQ-100	5.29			
BB	Rockwell SQ-100	5.86			

*Aluminum Carrier Housing

CY3101-2A

CL-9000 (Continued)

DISTRICT SALES OFFICE (DSO) AND WHEELBASE (WB) CODES CL-, CLT-9000


INCOMPLETE VEHICLE MANUFACTURED BY FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER

EXTERIOR PAINT COLORS					DSO
2K 9A					16
WB	TYPE GVW	BODY	TRANS 4	AXLE	
142	Z98	AT3	1G	AG-6	1987

WHEELBASE (INCHES)

120
126
134
142
145
148
152
163
178
186
204
246

DISTRICT SALES OFFICE (DSO) CODE

DSO — FSO — PTO (DOMESTIC, FOREIGN AND SPECIAL ORDER)

THE D.S.O. SPACE WILL SHOW A TWO DIGIT CODE NUMBER OF THE DISTRICT (SEE DISTRICT CODE CHART BELOW) WHICH ORDERED THE UNIT. THIS CODE WILL APPEAR ON ALL UNITS — DOMESTIC OR EXPORT. IF UNIT IS BUILT ON A D.S.O., F.S.O., P.T.O. (SPECIAL ORDERS), THE COMPLETE ORDER NUMBER IS TO APPEAR UNDER THE D.S.O. SPACE **AFTER** THE DISTRICT CODE.

DISTRICT CODES

11	BOSTON	41	CHICAGO	71	LOS ANGELES
12	BUFFALO	42	CLEVELAND	72	SAN JOSE
13	NEW YORK	43	MILWAUKEE	74	SEATTLE
14	PITTSBURGH	46	INDIANAPOLIS	75	PHOENIX
16	PHILADELPHIA	47	CINCINNATI	76	DENVER
17	WASHINGTON	48	DETROIT		
21	ATLANTA	52	DALLAS	83	GOVERNMENT
22	CHARLOTTE	53	KANSAS CITY	84	HOME OFFICE RESERVE
23	MEMPHIS	54	OMAHA	85	AMERICAN RED CROSS
24	JACKSONVILLE	55	ST. LOUIS	89	TRANSPORTATION SERVICES
26	NEW ORLEANS	57	HOUSTON	90's	EXPORT
28	LOUISVILLE	58	TWIN CITIES	00	SPECIAL

FORD OF CANADA

MERCURY REGIONS		FORD REGIONS	
A1	CENTRAL	B1	CENTRAL
A2	EASTERN	B2	EASTERN
A3	ATLANTIC	B3	ATLANTIC
A4	MIDWESTERN	B4	MIDWESTERN
A6	WESTERN	B6	WESTERN
A7	PACIFIC	B7	PACIFIC
A8	GREAT LAKES	B8	GREAT LAKES

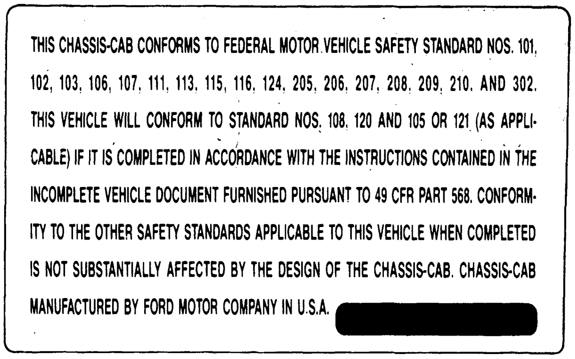
CY1801-2K

L-SERIES

General Information

CHASSIS-CAB CERTIFICATION LABEL

The Chassis-Cab Certification Label is attached to the rear face of the driver's door or door pillar. The label contains the name of the manufacturer, the month and year of manufacture and the certification statement.


THIS CHASSIS-CAB CONFORMS TO FEDERAL MOTOR VEHICLE SAFETY STANDARD NOS. 101, 102, 103, 106, 107, 111, 113, 115, 116, 124, 205, 206, 207, 208, 209, 210, AND 302. THIS VEHICLE WILL CONFORM TO STANDARD NOS. 108, 120 AND 105 OR 121 (AS APPLICABLE) IF IT IS COMPLETED IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE INCOMPLETE VEHICLE DOCUMENT FURNISHED PURSUANT TO 49 CFR PART 568. CONFORMITY TO THE OTHER SAFETY STANDARDS APPLICABLE TO THIS VEHICLE WHEN COMPLETED IS NOT SUBSTANTIALLY AFFECTED BY THE DESIGN OF THE CHASSIS-CAB. CHASSIS-CAB MANUFACTURED BY FORD MOTOR COMPANY IN U.S.A. [redacted]

A10416-1A

L-SERIES (Continued)

VEHICLE RATING DECAL

On cowl and windshield vehicles, the Rating Decal is mounted on the right side of the cowl top panel under the hood. On incomplete vehicles, the rating decal is attached to a booklet (incomplete vehicle manual) and secured to a suitable interior location. On all other vehicles, the Rating Decal is mounted on the rear face of the left front door.

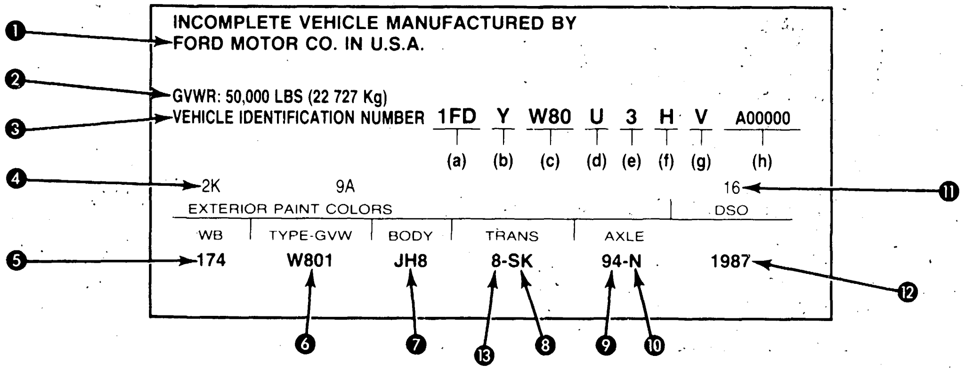
VEHICLE IDENTIFICATION NUMBER (VIN)

A seventeen digit combination of numbers and letters form the Vehicle Identification Number (VIN). The VIN is located in the center area of the Vehicle Rating Decal. Refer to Vehicle Rating Decal in this Section for the decal locations.

By looking at the seventeen digit VIN number, a variety of information about the vehicle can be determined. The first three digits identify the manufacturer and the vehicle make and type. The fourth digit determines the type of brake system (air or hydraulic) and the Gross Vehicle Weight Rating (GVWR) Class for Trucks (completed vehicles). For incomplete vehicles, the fourth digit determines the brake system only. Digits five, six and seven identify the model or line, series, chassis and cab type. The eighth digit points out the particular engine and type (gas or diesel) found in the vehicle. Digit nine is the VIN check digit. The tenth digit identifies the model year of a Ford-completed vehicle, or the model year of the incomplete vehicle, if sold by Ford as an incomplete vehicle. The eleventh digit determines the assembly plant. Digits twelve through seventeen make up the sequential serial and warranty number. Digit twelve uses the letter "A" until the production or sequence of 99,999 units (digits thirteen through seventeen) is reached. Letter "A" then becomes "B" for the next production sequence of vehicles.

Refer to the code portion of this Section for specific definitions of the numbers and letters of the Vehicle Identification Number (VIN).

Typical Truck Vehicle Rating Decal



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.
GVWR: 50,000 LBS (22 727 Kg)
VEHICLE IDENTIFICATION NUMBER 1FD Y W80 U 3 H V A00000
(a) (b) (c) (d) (e) (f) (g) (h)
2K 9A 16
EXTERIOR PAINT COLORS
DSO
WB TYPE-GVW BODY TRANS AXLE
174 W801 JH8 8-SK 94-N 1987
①
②
③
④
⑤
⑥
⑦
⑬
⑧
⑨
⑩
⑪
⑫

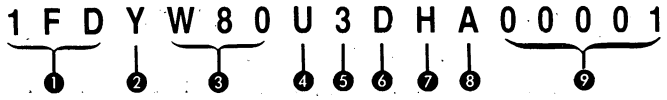
① Name and Location of Manufacturer
② Gross Vehicle Weight Rating in Pounds (LB) and Kilograms (KG)
③ Vehicle Identification Number
  (a) World Manufacturer Identifier
  (b) Brake System and Gross Vehicle Weight Rating (GVWR) Class for Trucks (complete vehicles); Brake System (only) for Incomplete Vehicles.
  (c) Model or Line, Series, Chassis and Cab Type
  (d) Engine Type
  (e) Check Digit
  (f) Model Year (Ford — completed vehicles)
  (g) Assembly Plant Code
  (h) Sequential Serial and Warranty Number
④ Exterior Paint Codes (Two sets of figures designates a two-tone)
⑤ Wheelbase in inches
⑥ Model Code and GVW-1982-1985 Model Code-1986
⑦ Interior Trim, Seat and Body/Cab Type
⑧ Transmission Code
⑨ Rear Axle Code
⑩ Front Axle Code
⑪ District/Special Order Codes
⑫ Vehicle Model Year
⑬ Auxiliary Transmission

CY2275-2G

L-SERIES (Continued)

Typical Vehicle Identification Number (VIN)

SAMPLE VIN NUMBER



❶ Position 1, 2, and 3 — Manufacturer, Make and Type (World Manufacturer Identifier)

❷ Position 4 — Brake System/GVWR Class for Trucks (complete vehicles); Brake System (only) for Incomplete Vehicles.

❸ Position 5, 6, and 7 — Model or Line, Series, Chassis Cab Type

❹ Position 8 — Engine Type

❺ Position 9 — Check Digit

❻ Position 10 — Model Year (Ford — Completed Vehicles)

❼ Position 11 — Assembly Plant

❽ Position 12 — Constant "A" until sequence number of 99,999 is reached, then changes to a constant "B" and so on.

❾ Position 13 through 17 — Sequence number — begins at 00001

CY2351-2G

Vehicle Identification Number (VIN) Codes

WORLD MANUFACTURER IDENTIFIER (VIN POSITIONS 1, 2 AND 3)

1 F D YW80U3HVA00001

VIN Code	Manufacturer	Make	Type
1FB	Ford Motor Company, USA	Ford	Bus
1FC	Ford Motor Company, USA	Ford	Basic (Stripped) Chassis
1FD	Ford Motor Company, USA	Ford	Incomplete Vehicle (IV)
1FF	Ford Motor Company, USA	Ford	Glider①
1FM	Ford Motor Company, USA	Ford	Multipurpose Vehicle (MPV)
1FT	Ford Motor Company, USA	Ford	Truck (Complete Vehicle)
2FB	Ford Motor Company of Canada, Ltd.	Ford	Bus
2FC	Ford Motor Company of Canada, Ltd.	Ford	Basic (Stripped) Chassis
2FD	Ford Motor Company of Canada, Ltd.	Ford	Incomplete Vehicle (IV)
2FF	Ford Motor Company of Canada, Ltd.	Ford	Glider①
2FM	Ford Motor Company of Canada, Ltd.	Ford	Multipurpose Vehicle (MPV)
2FT	Ford Motor Company of Canada, Ltd.	Ford	Truck (Complete Vehicle)

①Motor Vehicle Equipment without Engine, Transmission or Rear Axle.

CY2361-2G

L-SERIES (Continued)

BRAKE SYSTEM AND GVWR CLASS FOR TRUCKS — BRAKE SYSTEM (ONLY) FOR BUSES AND INCOMPLETE VEHICLES (VIN POSITION 4)

1FD P F83H5HVA00001

Brake System	GVWR Class	GVWR Range	VIN Code
Hydraulic	Class 3	10,001-14,000 pounds	K
Hydraulic	Class 4	14,001-16,000 pounds	L
Hydraulic	Class 5	16,001-19,500 pounds	M
Hydraulic	Class 6	19,501-26,000 pounds	N
Hydraulic	Class 7	26,001-33,000 pounds	P
Hydraulic	Class 8	33,001-55,000 pounds	R
		55,001 pounds and over	S
Air	Class 3	10,001-14,000 pounds	T
Air	Class 4	14,001-16,000 pounds	U
Air	Class 5	16,001-19,500 pounds	V
Air	Class 6	19,501-26,000 pounds	W
Air	Class 7	26,001-33,000 pounds	X
Air	Class 8	33,001-55,000 pounds	Y
		55,000 pounds and over	Z

CY2657-2D

MODEL OR LINE, SERIES, CHASSIS, CAB TYPE (VIN POSITIONS 5, 6 AND 7) 1983-1984

1FDY W80 U3EVJ00001

VIN Code	Description
A90	LTL 9000, Chassis Cab, Diesel — Tandem
A92	LTL 9000, Sleeper Cab Single, Diesel — Tandem
A98	LTL 9000, Sleeper Cab Double, Diesel — Tandem
F80	L 800, Chassis Cab, Gas — Tandem
K80	L 8000, Chassis Cab, Diesel
K90	L 9000, Chassis Cab, Diesel
N60	LN 600, Chassis Cab, Gas
N70	LN 700, Chassis Cab, Gas
N80	LN 800, Chassis Cab, Gas
R64	LN 600, Chassis Cab, with 8.2L Diesel Option
R70	LN 7000, Chassis Cab, Diesel
R74	LN 700, Chassis Cab, with 8.2L Diesel Option
R80	LN 8000, Chassis Cab, Diesel
R90	LN 9000, Chassis Cab, Diesel
S80	LNT 800, Chassis Cab, Gas — Tandem
T80	LT 800, Chassis Cab, Gas — Tandem
U80	LT 8000, Chassis Cab, Diesel — Tandem
U90	LT 9000, Chassis Cab, Diesel — Tandem
W80	LNT 8000, Chassis Cab, Diesel — Tandem
W90	LNT 9000, Chassis Cab, Diesel — Tandem
Y80	LTS 8000, Chassis Cab, Diesel — Tandem Set Back
Y90	LTS 9000, Chassis Cab, Diesel — Tandem Set Back

CY2352-2E

L-SERIES (Continued)

MODEL OR LINE, SERIES, CHASSIS, CAB TYPE (VIN POSITION 5, 6 AND 7) 1985-1986-1987

1FDY W80 U3HV A00001

VIN Code	Description	VIN Code	Description
A90	LTL-9000, Chassis Cab, Diesel Engine	S80	LS-8000, Chassis Cab, Cat. Diesel
A92	LTL-9000, 34" Sleeper Cab, Diesel Engine	S82	LS-8000, Chassis Cab, Ford Diesel
A98	LTL-9000, 60" Sleeper Cab, Diesel Engine	S90	LS-9000, Chassis Cab, Diesel
K80	L-8000, Chassis Cab, Diesel Engine	U80	LT-8000, Chassis Cab, Diesel Engine
K82	L-8000, Chassis Cab, Ford Diesel	U82	LT-8000, Chassis Cab, Ford Diesel
K90	L-9000, Chassis Cab, Diesel Engine	U90	LT-9000, Chassis Cab, Diesel Engine
N60	LN-600, Chassis Cab, Gas Engine	V90	LL-9000, Chassis Cab, Diesel
N70	LN-700, Chassis Cab, Gas Engine	W80	LNT-8000, Chassis Cab, Diesel Engine
R64	LN-600, Chassis Cab, 8.2L Diesel Engine	W82	LNT-8000, Chassis Cab, Ford Diesel
R70	LN-7000, Chassis Cab, Diesel Engine	W90	LNT-9000, Chassis Cab, Diesel Engine
R74	LN-700, Chassis Cab, 8.2L Diesel Engine	Y80	LTS-8000, Chassis Cab, Diesel Engine
R80	LN-8000, Chassis Cab, Diesel Engine	Y82	LTS-8000, Chassis Cab, Ford Diesel
R82	LN-8000, Chassis Cab, Ford Diesel	Y90	LTS-9000, Chassis Cab, Diesel Engine
R90	LN-9000, Chassis Cab, Diesel Engine		

CY2787-2C

ENGINE TYPE, DISPLACEMENT, CYLINDERS FUEL TYPE, AND MANUFACTURER (VIN POSITION 8)

1FDYW80 U 3HVA00001

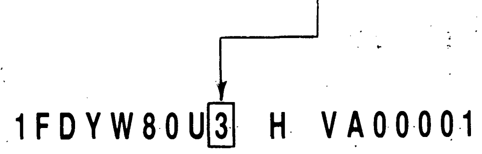
CODE	ENGINE DESCRIPTION	CODE	ENGINE DESCRIPTION	CODE	ENGINE DESCRIPTION
	Ford		Caterpillar		Detroit Diesel
H	6.1L (370) V-8 (Gas)	U	10.4L (636) 3208	J	7.0L (426) 6-71 N
K	7.0L (429) V-8 (Gas)	X	14.6L (893) 3406 B	N	8.2L (500) DDA N or T
7	6.1L (370) V-8 (LPG)		Cummins	R	9.0L (552) 6V-92 TA
8	7.0L (429) V-8 (LPG)	L	10.0L (611) L-10	T	9.3L (568) 8V-71 TA
P	6.6L (401) V-8 (Diesel)	S	9.1L (555) VT-225	V	12.1L (736) 8V-92 TA
A	7.8L (473) V-8 (Diesel)	W	14.0L (885) NTC, PT and Form		
		3	14.8L (903) VT-903		

Delete Engine
0 (zero) DSO Glider. Delete engine on motor vehicle equipment only.

CY2363-2G

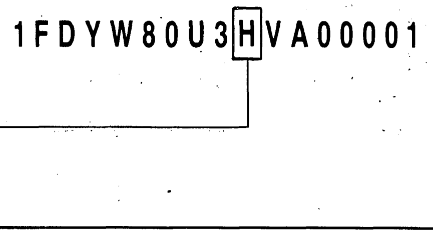
L-SERIES (Continued)

**CHECK DIGIT FOR ALL VEHICLES
(VIN POSITION 9)**



CY2364-1G

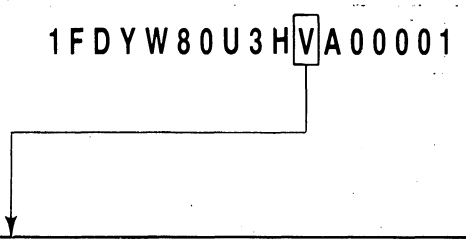
**VEHICLE MODEL YEAR
(FORD — COMPLETED VEHICLES)
(VIN POSITION 10)**



VIN Code	Assembly Plant
D	1983
E	1984
F	1985
G	1986
H	1987
J	1988
K	1989
L	1990

CY2365-1G

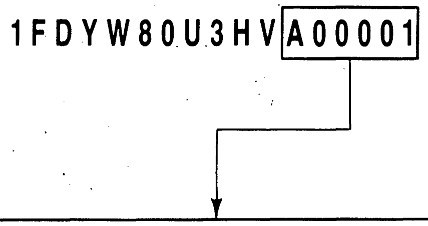
**ASSEMBLY
PLANT
(VIN POSITION 11)**



VIN Code	Assembly Plant
V	Kentucky Truck (Jefferson County, Kentucky)

CY2366-1G

**PRODUCTION SEQUENCE NUMBER
(VIN POSITIONS 12 THROUGH 17)**



SEQUENCE NUMBER
A 00001 — A 99,999 B 00001 — B 99,999 and so on.

CY2367-1G

Vehicle Data

The Vehicle Data appears on the Vehicle Rating Decal on the two lines following the identification number. The code set (two numbers or a number and letter) above COLOR identify the exterior paint color (two sets of codes designate a two-tone). The first three digits under W.B. designate the wheelbase in inches. The letter and three digits under TYPE/G.V.W. designate the truck model within a series and the gross vehicle weight rating. The letters and/or numeral under BODY designate the interior trim, seat and body type. The transmission installed in the vehicle is identified under TRANS by two letters, or a number and one letter. (If so equipped a number is also stamped before the transmission code to identify the auxiliary transmission.) A letter and a number or two numbers or two letters under AXLE identify the rear axle ratio (when required, a letter is also stamped after the rear axle code to identify the front axle).

A two-digit number is stamped above D.S.O. to identify the district which ordered the vehicle. If the vehicle is built to special order (Domestic Special Order, Foreign Special Order, Limited Production Option, or other special order), the complete order number will also appear above D.S.O. The vehicle model year appears in the lower right corner area of the decal under D.S.O. The charts that follow list the various vehicle data codes.

L-SERIES (Continued)

EXTERIOR PAINT COLOR CODES
1983-1984-1985-1986-1987

INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER **1FD Y W80 U 3 H V A00001**

2K 9A	16
EXTERIOR PAINT COLORS	DSO

WB	TYPE GVW	BODY	TRANS	AXLE	
174	W801	JH8	8-SK	94-N	1987

NOTE — TWO SETS OF CODES INDICATES TWO-TONE PAINT

1984-1985-1986-1987

Code	Color
1B	Medium Grey Metallic
1C	Raven Black
1D	Smoke Metallic
1G	Light Smoke Metallic
2K	Candy Apple Red
2L	Maroon
22	Rangoon Red
3L	Midnight Blue Metallic
3T	Bahama Blue
5F	Bright Orange
5G	Medium Caramel Metallic
53	Bright Caramel
5T	Medium Desert Tan
6N	Bright Yellow
6S	Chrome Yellow
67	Yellow
7D	Holly Green
8C	Pastel Chamois
8Q	Light Desert Tan
9A	Wimbledon White
9E	Pure White
9T	Light Chestnut
9V	Light Charcoal Metallic
9Y	Walnut Metallic
99	Prime

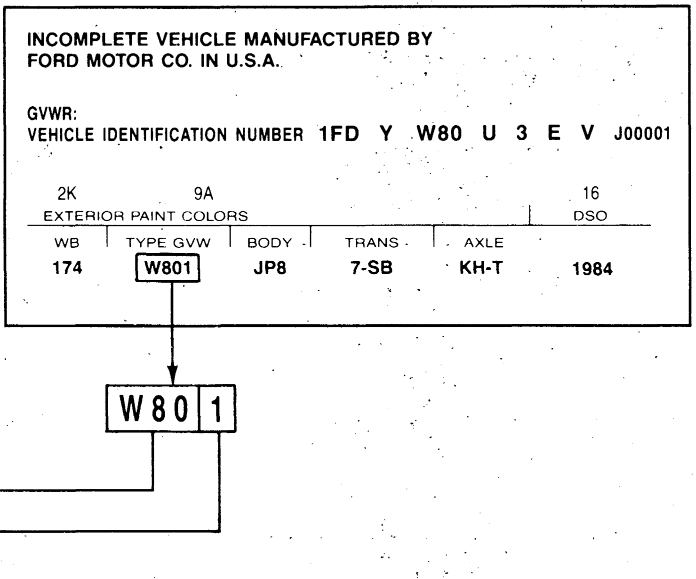
1983

Code	Color	Code	Color
1C	Black	7D	Holly Green
1G	Silver Metallic	8A	Dark Chamois Metallic
1P	Medium Gray Metallic	8C	Pastel Chamois
2G	Bright Bittersweet	8G	Medium Bittersweet Metallic
2K	Candy Apple Red	8J	Copper
2L	Maroon	8N	Dark Cordovan Metallic
2S	Dark Red Metallic	9A	White
3J	Light Harbor Blue Metallic	9E	Special White
3L	Midnight Blue Metallic	9P	Desert Tan
3P	Medium Brite Blue Metallic	9Q	Light Desert Tan
3T	Bahama Blue	9V	Light Charcoal Metallic
4A	Dark Teal Metallic	9W	Dark Charcoal
4J	Dark Spruce Metallic	9Y	Medium Walnut Metallic
4W	Light Teal Metallic	22	Rangoon Red
5C	Dark Cadet Blue Metallic	27	Bright Red
5F	Bright Orange	31	Light Cadet Blue
5G	Medium Caramel Metallic	32	Bright Blue
5Q	Medium Dark Brown Metallic	35	Light Cadet Blue Metallic
5T	Bright Caramel	61	Yellow
5U	Walnut Metallic	99	Prime
6S	Chrome Yellow		

CY2658-2D

L-SERIES (Continued)

TYPE — GROSS VEHICLE WEIGHT (GVW) CODES
1983-1984



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y W80 U 3 E V J00001

EXTERIOR PAINT COLORS					DSO
2K	9A				16
WB	TYPE GVW	BODY	TRANS	AXLE	
174	W801	JP8	7-SB	KH-T	1984

Series	Series Code	GVWR Code	GVWR kg (lb)
LN 600	N60, R64	0	7484 (16,500)
		1	8845 (19,500)
		2	9299 (20,500)
		3	9752 (21,500)
		4	9979 (22,000)
		5	10,433 (23,000)
		6	10,886 (24,000)
LN 7000	R70	0	9526 (21,000)
		1	10,433 (23,000)
		2	10,886 (24,000)
		3	11,340 (25,000)
		4	11,567 (25,500)
		5	12,247 (27,000)
		6	12,474 (27,500)
LN 700	N70, R74	0	9526 (21,000)
		1	10,433 (23,000)
		2	10,886 (24,000)
		3	11,340 (25,000)
		4	11,567 (25,500)
		5	12,247 (27,000)
		6	12,474 (27,500)
L 800	F80	0	10,433 (23,000)
		1	11,340 (25,000)
		3	11,567 (25,500)
		4	12,247 (27,000)
		5	12,474 (27,500)
		6	13,154 (29,000)
		7	14,062 (31,000)
		8	14,424 (31,800)
		9	14,515 (32,000)
		A	15,422 (34,000)
		B	15,876 (35,000)

Series	Series Code	GVWR Code	GVWR kg (lb)
LN 800	N80	0	10,433 (23,000)
		1	11,340 (25,000)
		2	11,567 (25,500)
		3	12,247 (27,000)
		4	12,474 (27,500)
		5	13,154 (29,000)
		6	14,062 (31,000)
		7	14,424 (31,800)
		8	14,515 (32,000)
		9	15,422 (34,000)
		A	15,876 (35,000)
LT 800	T80	1	18,597 (41,000)
		2	19,505 (43,000)
		3	20,321 (44,800)
		4	20,865 (46,000)
LNT 800	S80	1	18,597 (41,000)
		2	19,505 (43,000)
		3	20,321 (44,800)
		4	20,865 (46,000)
L 8000	K80	0	10,478 (23,100)
		1	11,567 (25,500)
		2	12,474 (27,500)
		3	14,062 (31,000)
		4	14,424 (31,800)
		5	14,515 (32,000)
		6	15,422 (34,000)
		7	15,876 (35,000)
LN 8000	R80	0	10,478 (23,100)
		1	11,567 (25,500)
		2	12,474 (27,500)
		3	14,062 (31,000)
		4	14,424 (31,800)
		5	14,515 (32,000)
		6	15,422 (34,000)
		7	15,876 (35,000)

CY2354-2F

L-SERIES (Continued)

TYPE — GROSS VEHICLE WEIGHT (GVW) CODES (CONT'D.)

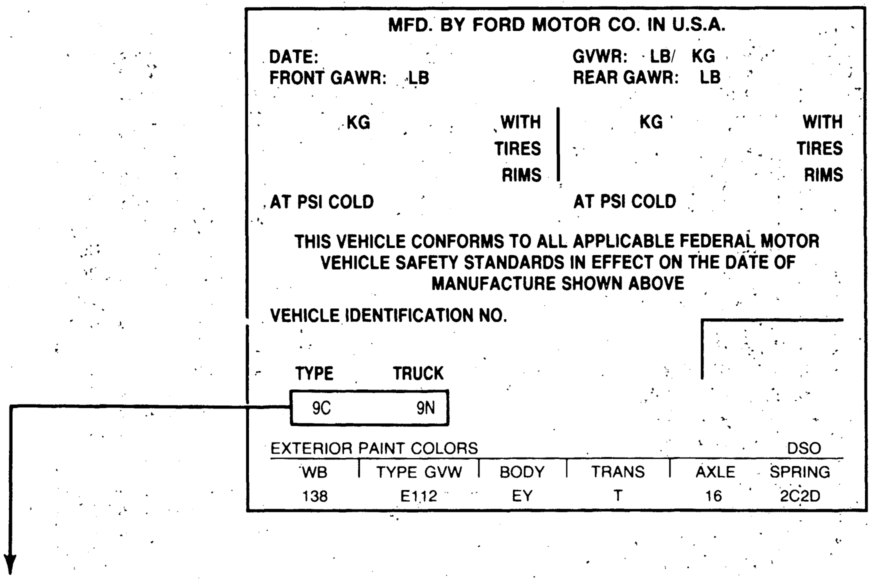
1983-1984

Series	Series Code	GVWR Code	GVWR kg(lb)
LT 8000	U80	0	17,690(39,000)
		1	18,597(41,000)
		2	20,321(44,800)
		3	20,865(46,000)
		4	22,680(50,000)
		5	22,680(50,000)
		6	24,494(54,000)
		7	24,948(55,000)
		8	25,401(56,000)
		9	27,216(60,000)
		A	27,669(61,000)
		B	28,123(62,000)
LTS 8000	Y80	0	17,690(39,000)
		1	18,597(41,000)
		2	20,865(46,000)
		3	22,680(50,000)
		4	22,680(50,000)
		5	23,587(52,000)
		6	24,494(54,000)
		7	24,948(55,000)
		8	25,401(56,000)
		9	27,216(60,000)
		A	27,669(61,000)
		B	28,123(62,000)
		C	29,030(64,000)
LNT 8000	W80	0	17,690(39,000)
		1	18,597(41,000)
		2	20,321(44,800)
		3	20,865(46,000)
		4	22,680(50,000)
		5	22,680(50,000)
		6	24,494(54,000)
		7	24,948(55,000)
		8	25,401(56,000)
		9	27,216(60,000)
		A	27,669(61,000)
		B	28,123(62,000)
L 9000	K90	0	12,700(28,000)
		1	14,424(31,800)
		2	14,515(32,000)
		3	15,876(35,000)
LN 9000	R90	6	12,700(28,000)
		7	14,424(31,800)
		2	14,515(32,000)
		4	15,876(35,000)

Series	Series Code	GVWR Code	GVWR kg(lb)
LT 9000	U90	0	19,505(43,000)
		1	20,321(44,800)
		2	20,865(46,000)
		3	21,772(48,000)
		4	22,680(50,000)
		5	22,680(50,000)
		6	23,587(52,000)
		7	24,494(54,000)
		8	26,308(58,000)
		9	27,215(60,000)
		A	27,669(61,000)
		B	28,123(62,000)
		C	32,658(72,000)
		D	33,566(74,000)
		E	34,473(76,000)
LTS 9000	Y90	0	20,320(44,800)
		1	21,772(48,000)
		2	22,680(50,000)
		3	22,680(50,000)
		4	23,587(52,000)
		5	24,494(54,000)
		6	25,401(56,000)
		7	26,308(58,000)
		8	27,215(60,000)
		9	27,669(61,000)
		A	28,123(62,000)
		B	32,658(72,000)
		C	33,566(74,000)
		D	34,473(76,000)
		E	34,972(77,100)
		F	35,380(78,000)
		G	35,879(79,100)
		H	36,787(81,100)
LNT 9000	W90	0	19,505(43,000)
		1	20,321(44,800)
		2	20,865(46,000)
		3	21,772(48,000)
		4	22,680(50,000)
		5	23,586(52,000)
		6	24,494(54,000)
		7	26,308(58,000)
		8	27,215(60,000)
		9	28,123(62,000)
		A	32,658(72,000)
		B	33,566(74,000)
		C	34,473(76,000)
LTL 9000	A90, A92	0	20,321(44,800)
		1	20,865(46,000)
		2	21,772(48,000)
		3	22,680(50,000)
		4	22,680(50,000)
		5	23,589(52,000)
		6	24,494(54,000)
		7	26,308(58,000)
		8	27,215(60,000)

L-SERIES (Continued)

EXTERIOR PAINT COLOR CODES
E-150 — E-250 — E-350



MFD. BY FORD MOTOR CO. IN U.S.A.

DATE: GVWR: LB/ KG
FRONT GAWR: LB REAR GAWR: LB

KG WITH TIRES RIMS AT PSI COLD
KG WITH TIRES RIMS AT PSI COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEHICLE IDENTIFICATION NO.

TYPE TRUCK
9C 9N

EXTERIOR PAINT COLORS DSO

WB	TYPE GVW	BODY	TRANS	AXLE	SPRING
138	E112	EY	T	16	2C2D

E-150 — E-350

Code	Color
1C	Black
1E	Silver Metallic
3L	Midnight Blue Metallic
34	Light Regatta Blue
7G	Midnight Regatta Blue Metallic
8Q	Light Desert Tan
9A	Wimbledon White

NOTE: Two sets of codes indicate two-tone paint

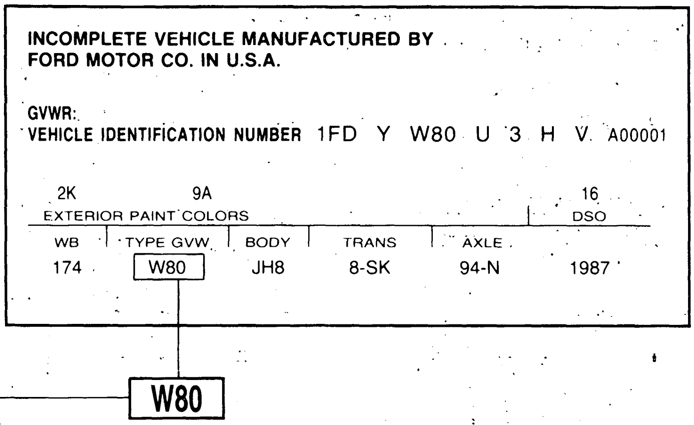
RPO UNIQUE COLORS (NON-POLISH) "D"	
2A	Medium Canyon Red Metallic
9C	Bright Copper Metallic
9N	Desert Tan Metallic

NOTE: Exterior colors that are not available on all Parcel Delivery Van Cutaway are the following codes: 1E, 2A, 7G and 8Q.

CY2788-2A

L-SERIES (Continued)

TYPE-GROSS VEHICLE WEIGHT (GVW) CODES
1986-1987



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y W80 U 3 H V A00001

2K	9A				16
EXTERIOR PAINT COLORS					DSO
WB	TYPE GVW	BODY	TRANS	AXLE	
174	W80	JH8	8-SK	94-N	1987

W80

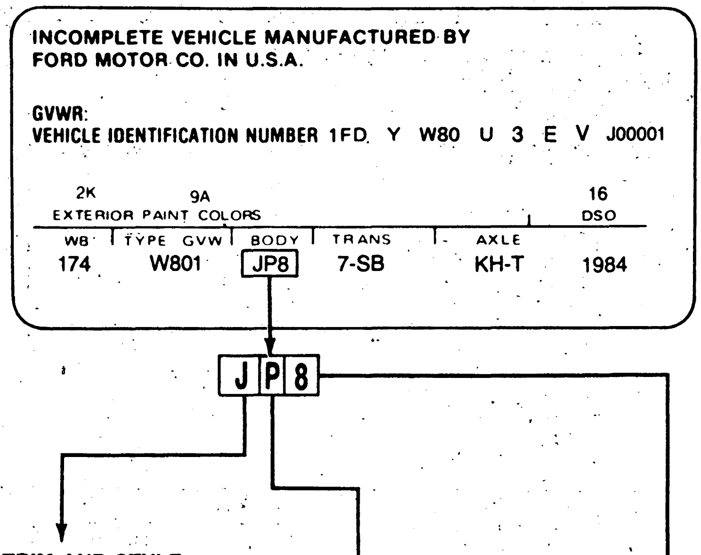
Code	Series	GVWR Lb.		Vehicle Shipping Weight Lb.
		Standard	Maximum	
R74	LN 700①	21,200	28,000	6,600
R70	LN 7000①	21,200	28,000	7,725
R80	LN 8000	23,100	35,000	8,750
R82	LN 8000	23,100	35,000	8,750
R90	LN 9000	28,000	35,000	10,900
W80	LNT 8000	41,300	64,000	12,150
W82	LNT 8000	41,300	64,000	12,150
W90	LNT 9000	43,000	64,000	14,400
K80	L 8000	23,100	35,000	9,100
K82	L 8000	23,100	35,000	9,100
K90	L 9000	28,000	35,000	10,900
V90	LL 9000	35,000	35,000	—
S80	LS 8000	25,100	39,000	—
S82	LS 8000	25,100	39,000	—
S90	LS 9000	29,900	39,000	—
U80	LT 8000	41,300	64,000	12,350
U82	LT 8000	41,300	64,000	12,350
Y80	LTS 8000	41,300	66,000	12,500
Y82	LTS 8000	41,300	66,000	12,500
U90	LT 9000	43,000	64,000	14,450
Y90	LTS 9000	44,800	66,000	14,900
A90	LTL 9000	46,000	62,000	14,350
A92	LTL 9000	46,000	62,000	14,350
A98	LTL 9000	46,000	62,000	14,350

NOTE:
①1986 Model Year Only

CY2912-2B

L-SERIES (Continued)

BODY CODES
1983-1984



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y W80 U 3 E V J00001

2K	9A					16
EXTERIOR PAINT COLORS						DSO
WB	TYPE GVW	BODY	TRANS		AXLE	
174	W801	JP8	7-SB		KH-T	1984

SEAT TRIM AND STYLE

Code	Color
J	Vinyl Bench
C	Woven Vinyl and Vinyl Bench
L	Heavy Duty Vinyl Bench
H	Knitted Vinyl and Vinyl Bucket
G	Polyknit and Vinyl Bucket Custom
F	Polyknit and Vinyl Bucket (Custom Hi-Level)

TRIM COLOR

Code	Color
A	Black/Charcoal
D	Red
P	Tan/Saddle
S	Dove Gray
T	Tan or Caramel
Z	Saddle

CAR/BODY STYLES

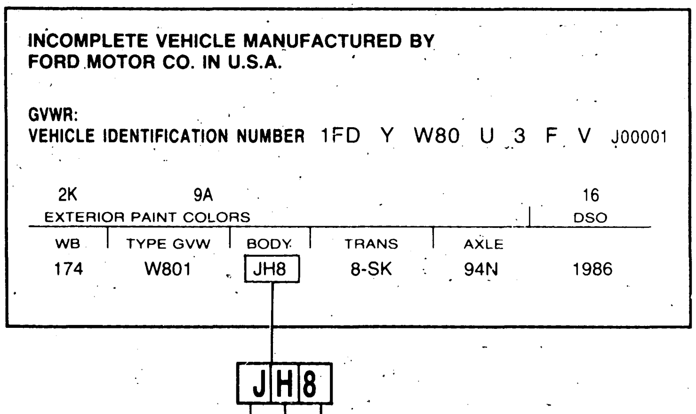
Code	Style
7	Cowl
8	Chassis — Cab
9	Sleeper Cab

NOTE — ON COWL UNITS THE FIRST TWO DIGITS OF THE BODY CODE REMAIN BLANK

CY2356-2D

L-SERIES (Continued)

BODY CODES
1985-1986



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y W80 U 3 F V J00001

2K	9A				16
EXTERIOR PAINT COLORS					DSO
WB	TYPE GVW	BODY	TRANS	AXLE	
174	W801	JH8	8-SK	94N	1986

CAB/BODY STYLE

Code	Style
6	Chassis — Cab, Fire Truck
7	Chassis — Cowl
8	Chassis — Cab
F	Chassis — Cab, Fire Truck with Electric Fuel Pump
G	Chassis — Cowl with Electric Fuel Pump
H	Chassis — Cab with Electric Fuel Pump

TRIM COLOR

Code	Color
A	Black/Charcoal
H	Tan/Saddle
K	Chestnut
T	Caramel
L	Chestnut/Tan
1	Black w/Red Laser Stripe

SEAT TRIM AND STYLE

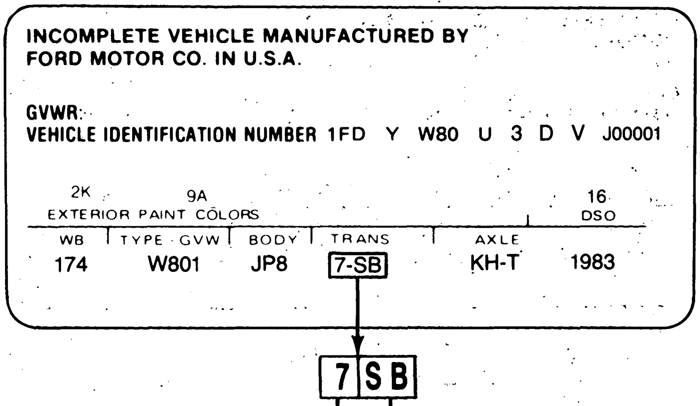
Code	Color
A	Polyknit and Vinyl Bucket (Custom)
B	Polyknit and Vinyl Bench (Custom)
F	Polyknit and Vinyl Bucket (Custom Hi-Level)
J	Vinyl Bench (Base)
M	Heavy Duty Vinyl Bench (Base)
N	Knitted Vinyl and Vinyl Bucket (Base)

NOTE — ON COWL UNITS THE FIRST TWO DIGITS OF THE BODY CODE REMAIN BLANK

CY2789-2C

L-SERIES (Continued)

TRANSMISSION CODES
1983



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y W80 U 3 D V J00001

2K	9A				16
EXTERIOR PAINT COLORS					DSO
WB	TYPE GVW	BODY	TRANS	AXLE	
174	W801	JP8	7-SB	KH-T	1983

AUXILIARY TRANSMISSION CODE

CODE	DESCRIPTION
4	Spicer 7231D
7	Spicer R8341L
8	Spicer 7041

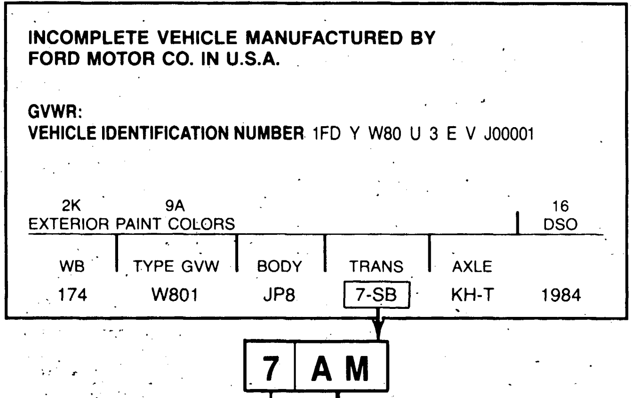
TRANSMISSION CODE

CODE	DESCRIPTION	CODE	DESCRIPTION
AA	Allison AT-545	FV/53	Fuller RTO-12515/RTO-14615
AB	Allison MT-643	FW/DC	Fuller RT-9508/RT-11608
AC	Allison MT-653	FX/FD	Fuller RTO-1157DLL/RTO-11607LL
CA	Clark 280VO	FY/FB	Fuller RTO-1157DL/RTO-11607L
CC	Clark 282 VHD	PD	Fuller RT-14608
CE	Clark 285 VHD	3K	Fuller RT-14613
CB	Clark 282V	52	Fuller RT-11615
CD	Clark 285V	NF	Fuller RT-14609A
CF	Clark 390V	FA	Fuller 11608LL
CG	Clark 397V	FP	Fuller RT-12509
FF/1G	Fuller RT-910/RT-11610	SB	Spicer CM5052-A/5552-A
FH/1F	Fuller RTO-9508LL/RTO-11608LL	SC	Spicer CM5252-A/5852-A
FI/1G	Fuller RT-1110/RT-11610	SD	Spicer CM6052A
FJ/FE	Fuller RT-9509A/RT-11609A	SE	Spicer CM6052B
FL/3J	Fuller RTO-9513/RTO-11613	SF	Spicer CM6052C
FM/1H	Fuller RT-12510/RTO-J14610	RR	Delete Trans.
FN/3K	Fuller RTO-12513/RTO-14613	WA	Warner T-19
FQ/FE	Fuller RT-11509/RT-11609A	7A	Spicer 1207-3A
FR/FG	Fuller RTO-9509A/RTO-11609B	7B	Spicer 1372-A
FS	Fuller RT-6610	NA	New Process 435
FT	Fuller RT-6613	NB	New Process 542FD
FU	Fuller T-11605A	NC	New Process 542FL

CY2357-2D

L-SERIES (Continued)

TRANSMISSION CODES
1984



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y W80 U 3 E V J00001

EXTERIOR PAINT COLORS					DSO
2K 9A					16
WB	TYPE GVW	BODY	TRANS	AXLE	
174	W801	JP8	7-SB	KH-T	1984

AUXILIARY TRANSMISSION CODE

Code	Description
2	Power Take Off
5	Spicer 7041 & PTO
6	Spicer R8341L & PTO
7	Spicer R8341L
8	Spicer 7041

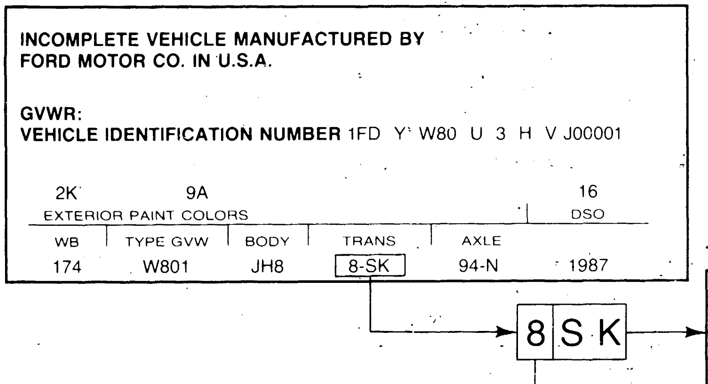
TRANSMISSION CODE

Code	Description	Code	Description
AA	Allison AT-545 Automatic	CK	Clark CL557 5-Speed
BR	Allison MT-643 Automatic	EA	Fuller RT11608 8-Speed
BS	Allison MT-653 Automatic	EB	Fuller RT11610 10-Speed
AD	Clark 282V 5-Speed	EC	Fuller RTO11613 13-Speed OD
AE	Clark 285V 5-Speed	ED	Fuller RT11615 15-Speed
AH	New Process NP435 4-Speed	EE	Fuller RT14608 8-Speed
AJ	New Process NP542FD 5-Speed	EF	Fuller RTO14608LL 10-Speed OD
AK	New Process NP542FL 5-Speed	EG	Fuller RT14609A 9-Speed
AM	Spicer CM5052A 5-Speed	EH	Fuller RT14610 10-Speed
AN	Spicer CM5252A 5-Speed	EJ	Fuller RTO14613 13-Speed OD
AS	Warner T-19D 4-Speed	EK	Fuller RT14615 15-Speed
BJ	Spicer CM6052A 5-Speed	EL	Fuller RTO14609B 9-Speed OD
BK	Spicer CM6052C 5-Speed	FA	Fuller RTO11608LL 10-Speed OD
BL	Spicer CM6052B 5-Speed	FB	Fuller RTO11607L 8-Speed OD
BN	Fuller RT6610 10-Speed	FD	Fuller RTO11607LL 9-Speed OD
BP	Fuller RT6613 13-Speed	FE	Fuller RT11609A 9-Speed
BQ	Spicer 1372-A 7-Speed	FG	Fuller RTO11609B 9-Speed OD
BT	Fuller T11605A 5-Speed	RR	Delete Transmission
CE	Spicer 1207-3A 7-Speed OD	SK	Spicer CM5552A 5-Speed
CF	Clark 282 VHD 5-Speed	SL	Spicer CM5852A 5-Speed
CG	Clark 285 VHD 5-Speed	SM	Spicer CM5510 5-Speed
CJ	Clark CL-551 5-Speed	SN	Spicer CM4054A 5-Speed

CY2659-2A

L-SERIES (Continued)

TRANSMISSION CODES
1985-1986-1987



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y W80 U 3 H V J00001

2K	9A				16
EXTERIOR PAINT COLORS					DSO
WB	TYPE GVW	BODY	TRANS	AXLE	
174	W801	JH8	8-SK	94-N	1987

AUXILIARY TRANSMISSION CODE

Code	Description
2	Power Take Off
5	PTO w/Spicer 7041 Aux.
6	PTO w/Spicer R8341L Aux.
7	Spicer R8341L Aux.
8	Spicer 7041 Aux.
A	French Labels
B	PTO & French Labels
E	PTO w/7041 Aux. & French Labels
F	PTO w/R8341L Aux. & French Labels
G	R8341L Aux. & French Labels
H	7041 Aux. & French Labels
J	California Emission
K	PTO & Cal. Emiss.
N	PTO w/7041 Aux. & Cal. Emiss.
O	PTO w/R8341L Aux. Cal. Emiss.
P	R8341L Aux. & Cal. Emiss.
Q	7041 Aux. & Cal Emiss.

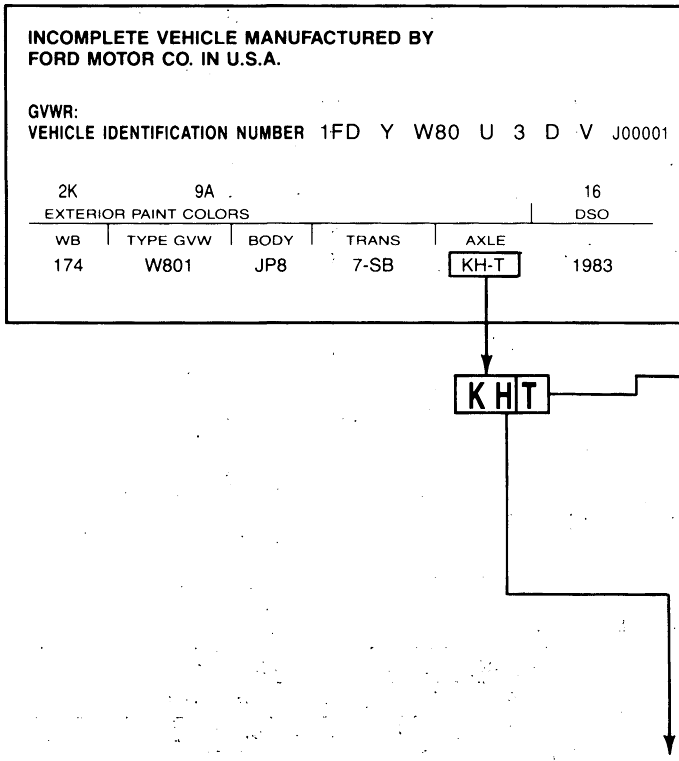
TRANSMISSION CODE

Code	Description
AA	Allison AT-545 Automatic
AB	Allison MT-643 Automatic
AC	Allison MT-653 Automatic
CB	Clark 282V 5-Speed
CD	Clark 285V 5-Speed
AH	New Process NP435 4-Speed
AJ	New Process NP542FD 5-Speed
AK	New Process NP542FL 5-Speed
AM	Spicer CM5052A 5-Speed
AN	Spicer CM5252A 5-Speed
AS	Warner T-19D 4-Speed
BJ	Spicer CM6052A 5-Speed
BK	Spicer CM6052C 5-Speed
BL	Spicer CM6052B 5-Speed
BN	Fuller RT6610 10-Speed
BP	Fuller RT6613 13-Speed
BQ	Spicer 1372-A 7-Speed
BT	Fuller T11605A 5-Speed
CE	Spicer 1207-3A 7-Speed OD
CC	Clark 282 VHD 5-Speed
CE	Clark 285 VHD 5-Speed
CH	Clark CL-558 5-Speed
CJ	Clark CL-551 5-Speed
CK	Clark CL557 5-Speed
CR	Fuller FS-6105-A 5-Speed
CS	Fuller FS-6105-B 5-Speed
CT	Fuller FS-5106 6-Speed
CU	Fuller FS-6106 6-Speed
EA	Fuller RT11608 8-Speed
EB	Fuller RT11610 10-Speed
EC	Fuller RTO11613 13-Speed OD
ED	Fuller RT11615 15-Speed
EE	Fuller RT14608 8-Speed
EF	Fuller RTO14608LL 10-Speed OD
EG	Fuller RT14609A 9-Speed
EH	Fuller RT14610 10-Speed
EJ	Fuller RTO14613 13-Speed OD
EK	Fuller RT14615 15-Speed
EL	Fuller RTO14609B 9-Speed OD
FA	Fuller RTO11608LL 10-Speed OD
FB	Fuller RTO11607L 8-Speed OD
FD	Fuller RTO11607LL 9-Speed OD
FE	Fuller RT11609A 9-Speed
FG	Fuller RTO11609B 9-Speed OD
FH	Fuller T-8607-A 7-Speed
FJ	Fuller RT-8609 9-Speed
RR	Delete Transmission
SK	Spicer CM5552A 5-Speed
SL	Spicer CM5852A 5-Speed
SM	Spicer CM5510 5-Speed
SN	Spicer CM4054A 5-Speed

CY2790-2C

L-SERIES (Continued)

AXLE CODES — 1983


INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y W80 U 3 D V J00001

2K	9A				16
EXTERIOR PAINT COLORS					DSO
WB	TYPE GVW	BODY	TRANS	AXLE	
174	W801	JP8	7-SB	KH-T	1983

FRONT AXLE CODES

Code		Description	Code		Description
Manual	Power		Manual	Power	
2	K	5500 lb.	7	P	12,000 lb.
4	M	7000 lb.	H	—	12,000 lb. Steer-Ease
9	W	8000 lb.	E	D	12,000 lb. Alum.
			F	—	12,000 lb. w/Steer-Ease
5	N	9000 lb.	—	S	16,000 lb.
			—	T	18,000 lb.
			—	U	20,000 lb.

SINGLE REAR AXLE CODES (11,000 lb. to 18,500 lb. Capacity)

Code	Description	Ratio	Code	Description	Ratio	Code	Description	Ratio
N9	Spicer G175-T	4.89/6.79	FM	Eaton 15201	5.86/8.15	41	Rockwell D-140	5.83
N1	Spicer G175-T	5.57/7.75	FP	Eaton 15201	6.29/8.74	42	Rockwell D-140	6.20
N2	Spicer G175-T	6.17/8.58	EH	Eaton 17221	5.57/7.60	44	Rockwell D-140	6.80
N3	Spicer G175-T	6.50/9.04	FH	Eaton 17221	6.14/8.38	U2	Rockwell H-173	4.62
N4	Spicer G175-T	7.17/9.97	GH	Eaton 17221	6.50/8.86	U3	Rockwell H-173	5.29
P9	Spicer G185-T	4.89/6.66	JH	Eaton 17221	6.57/8.94	U5	Rockwell H-173	5.83
P1	Spicer M185-T	5.57/7.60	HH	Eaton 17221	7.17/9.77	U6	Rockwell H-173	6.17
P2	Spicer M185-T	6.14/8.38	EQ	Eaton 17121	5.57	U7	Rockwell H-173	6.83
P3	Spicer M185-T	6.50/8.86	FQ	Eaton 17121	6.14	U8	Rockwell H-173	7.17
P4	Spicer M185-T	7.17/9.77	JQ	Eaton 17121	6.51	67	Rockwell F-106	5.29
E9	Eaton 16244	4.88/6.78	KQ	Eaton 17121	7.14	68	Rockwell F-106	5.83
E1	Eaton 16244	5.57/7.75	KH	Eaton 17221	7.14/9.71	61	Rockwell F-106	6.14
E0	Eaton 16244	6.14/8.54	ES	Eaton 17101	4.88	63	Rockwell F-106	6.83
RD	Eaton 16244	6.57/9.13	FS	Eaton 17101	5.29	65	Rockwell F-106	7.17
E5	Eaton 16244	7.17/9.97	ES	Eaton 17201	4.88/6.65			
F1	Eaton 15201	5.57/7.75	FS	Eaton 17201	5.29/7.21			

SINGLE REAR AXLE CODES (22,000 lb. and 23,000 lb., Single Axle)

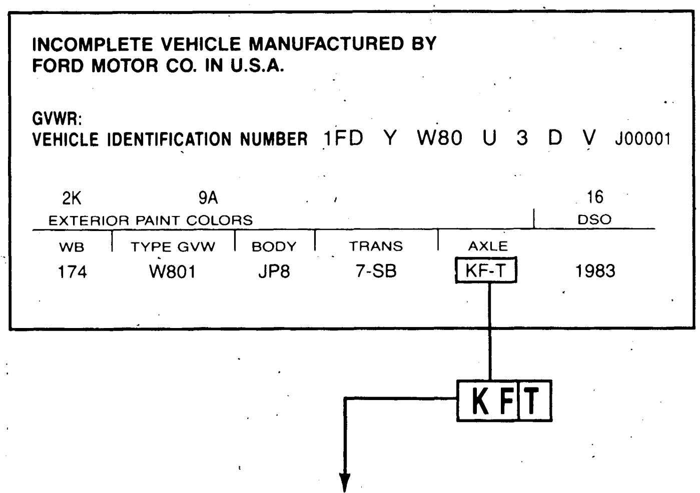
Code	Description	Ratio	Code	Description	Ratio	Code	Description	Ratio
MB	Eaton 22221	4.88/6.65	EG	Eaton 23121	6.17	8A	Rockwell R-170	3.70
NB	Eaton 22221	5.29/7.21	FG	Eaton 23121	6.67	9A	Rockwell R-170	3.90
JB	Eaton 22221	6.17/8.41	SK	Eaton 22121	4.88	1A	Rockwell R-170	4.11
KB	Eaton 22221	6.50/8.86	KK	Eaton 22121	5.29	2A	Rockwell R-170	4.33
LB	Eaton 22221	7.17/9.77	FK	Eaton 22121	5.57	VA	Rockwell R-170	4.88
GG	Eaton 23121	3.70	GK	Eaton 22121	6.17	3A	Rockwell R-170	5.29
JG	Eaton 23121	3.90	HK	Eaton 22121	6.50	7A	Rockwell R-170	5.86
AG	Eaton 23121	4.11	JK	Eaton 22121	7.17	4A	Rockwell R-170	6.14
BG	Eaton 23121	4.33	RP	Eaton 23221	4.88/6.64	5A	Rockwell R-170	6.83
HG	Eaton 23121	4.56	CP	Eaton 23221	5.43/7.39	6A	Rockwell R-170	7.40
CG	Eaton 23121	4.88	DP	Eaton 23221	6.17/8.40	3T	Rockwell R-170 ♦	3.70
DG	Eaton 23121	5.43	EP	Eaton 23221	6.67/9.08	1T	Rockwell R-170 ♦	4.11
						2T	Rockwell R-170 ♦	4.33

♦ Aluminum Carrier Housing

CY2585-2A

L-SERIES (Continued)

AXLE CODES (CONT'D.) — 1983



INCOMPLETE VEHICLE MANUFACTURED BY FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y W80 U 3 D V J00001

TANDEM REAR AXLE CODES

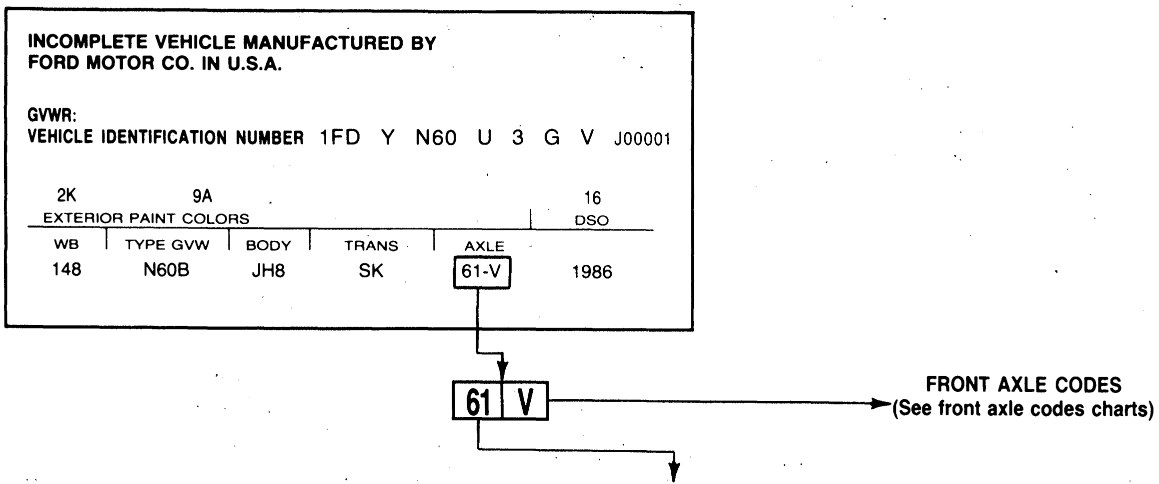
Code	Description	Ratio	Code	Description	Ratio	Code	Description	Ratio
3C	Eaton DS341	3.70	1X	Eaton DP440P	5.31	1Y	Rockwell SSHD	4.11
4C	Eaton DS341	3.90	2X	Eaton DP440P	5.90	2Y	Rockwell SSHD	4.33
1C	Eaton DS341	4.11	3X	Eaton DP440P	7.20	5Y	Rockwell SSHD	4.63
2C	Eaton DS341	4.33	UX	Eaton DS440P	3.70	4Y	Rockwell SSHD	5.29
5C	Eaton DS341	4.56	NX	Eaton DS440P	3.90	7Y	Rockwell SSHD	5.57
6C	Eaton DS341	4.88	PX	Eaton DS440P	4.11	9Y	Rockwell SSHD	6.17
7C	Eaton DS341	5.29	QX	Eaton DS440P	4.33	W2	Rockwell SQ-100	3.70
8C	Eaton DS341	5.57	RX	Eaton DS440P	4.62	W3	Rockwell SQ-100	3.90
NC	Eaton DS341	5.83	EU	Eaton DT341	4.88/6.65	W4	Rockwell SQ-100	4.11
9C	Eaton DS341	6.14	FU	Eaton DT341	5.29/7.21	W5	Rockwell SQ-100	4.33
RC	Eaton DS341	6.50	GU	Eaton DT341	5.57/7.60	W7	Rockwell SQ-100	4.63
SC	Eaton DS341	7.17	HU	Eaton DT341	6.14/8.38	W8	Rockwell SQ-100	4.88
3L	Eaton DS381	3.70	JU	Eaton DT341	6.50/8.86	W9	Rockwell SQ-100	5.29
4L	Eaton DS381	3.90	KU	Eaton DT341	7.17/9.77	WA	Rockwell SQ-100	5.83
1L	Eaton DS381	4.11	WK	Rockwell SL-100	3.70	WB	Rockwell SQ-100	6.17
2L	Eaton DS381	4.33	WL	Rockwell SL-100	3.90	WC	Rockwell SQ-100	6.83
5L	Eaton DS381	4.56	WM	Rockwell SL-100	4.11	WD	Rockwell SQ-100	7.20
6L	Eaton DS381	4.88	WN	Rockwell SL-100	4.33	TA	Rockwell SQHP	3.70
7L	Eaton DS381	5.29	WQ	Rockwell SL-100	4.63	TB	Rockwell SQHP	4.11
8L	Eaton DS381	5.57	WR	Rockwell SL-100	4.88	TC	Rockwell SQHP	4.44
UL	Eaton DS381	5.83	WS	Rockwell SL-100	5.29	V3	Rockwell SQHP ♦	3.70
9L	Eaton DS381	6.14	WT	Rockwell SL-100	5.83	V1	Rockwell SQHP ♦	4.11
SL	Eaton DS381	6.50	WU	Rockwell SL-100	6.17	DX	Eaton DT401P	4.11/5.61
TL	Eaton DS381	7.17	WV	Rockwell SL-100	6.83	EX	Eaton DT401P	4.33/5.91
TV	Eaton DP381	5.05	WW	Rockwell SL-100	7.20	FX	Eaton DT401P	4.56/6.21
IV	Eaton DP381	5.61	6Y	Rockwell SSHD	3.90			

♦ Aluminum Carrier Housing

CY2586-2A

L-SERIES (Continued)

SINGLE REAR AXLE CODES — 1984-1985-1986



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y N60 U 3 G V J00001

2K	9A				16
EXTERIOR PAINT COLORS					DSO
WB	TYPE GVW	BODY	TRANS	AXLE	
148	N60B	JH8	SK	61-V	1986

SINGLE REAR AXLE CODES

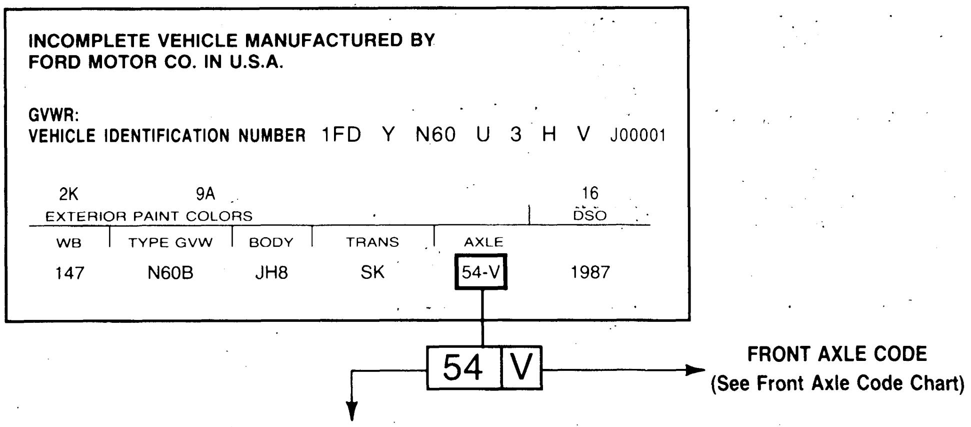
Code	Description	Ratio	Code	Description	Ratio	Code	Description	Ratio
1A	Rockwell R-170	4.11	F1	Eaton 15201	5.57/7.75	N9	Spicer G-175-T	4.89/6.79
1T	Rockwell R-170*	4.11	FG	Eaton 23121	6.67	NB	Eaton 22221	5.29/7.21
2A	Rockwell R-170	4.33	FH	Eaton 17221	6.14/8.38	NK	Eaton 22121	3.90
2T	Rockwell R-170*	4.33	FK	Eaton 22121	5.57	P1	Spicer M190-T	5.57/7.60
3A	Rockwell R-170	5.29	FM	Eaton 15201	5.86/8.15	P2	Spicer M190-T	6.14/8.38
3T	Rockwell R-170*	3.70	FP	Eaton 15201	6.29/8.74	P3	Spicer M190-T	6.50/8.86
41	Rockwell D-140	5.83	FQ	Eaton 17121	6.14	P4	Spicer M190-T	7.17/9.77
42	Rockwell D-140	6.20	FS	Eaton 17101	5.29	P9	Spicer M190-T	4.89/6.66
44	Rockwell D-140	6.80	GG	Eaton 23121	3.70	PB	Eaton 22221	3.90/5.31
4A	Rockwell R-170	6.14	GK	Eaton 22121	6.17	PK	Eaton 22121	3.90
5A	Rockwell R-170	6.83	GP	Eaton 23221	4.11/5.60	PP	Eaton 23221	3.70/5.04
61	Rockwell F-106	6.14	H1	Spicer M220-T	3.70/5.05	PQ	Spicer M190-T	3.70/5.05
63	Rockwell F-106	6.83	H2	Spicer M220-T	3.90/5.32	PS	Spicer M190-T	4.11/5.60
65	Rockwell F-106	7.17	H3	Spicer M220-T	4.11/5.60	PV	Spicer M190-T	4.56/6.22
67	Rockwell F-106	5.29	H4	Spicer M220-T	5.29/7.21	PY	Spicer M190-T	5.29/7.21
68	Rockwell F-106	5.83	H5	Spicer M220-T	4.89/6.66	QB	Eaton 22221	4.11/5.61
6A	Rockwell R-170	7.40	H6	Spicer M220-T	5.57/7.60	QP	Eaton 23221	4.56/6.21
7A	Rockwell R-170	5.86	H7	Spicer M220-T	6.14/8.38	RD	Eaton 16244	6.57/9.13
8A	Rockwell R-170	3.70	HB	Eaton 22221	5.57/7.60	RK	Eaton 22121	4.62
9A	Rockwell R-170	3.90	HG	Eaton 23121	4.56	RP	Eaton 23221	4.88/6.64
AE	Spicer M220-S	4.11	HH	Eaton 17221	7.17/9.77	SA	Rockwell R-170	4.63
AG	Eaton 23121	4.11	HK	Eaton 22121	6.50	SB	Eaton 22221	4.62/6.31
AS	Eaton 17101	3.70	HQ	Eaton 17121	7.17	SK	Eaton 22121	4.88
BG	Eaton 23121	4.33	HZ	Spicer M220-T	4.56/6.22	U1	Rockwell H-173	3.73
BS	Eaton 17101	4.11	JB	Eaton 22221	6.17/8.41	U7	Rockwell H-173	6.83
CG	Eaton 23121	4.88	JE	Spicer M220-S	3.70	U8	Rockwell H-173	7.17
CP	Eaton 23221	5.43/7.39	JG	Eaton 23121	3.90	UD	Rockwell H-173	4.56
DG	Eaton 23121	5.43	JH	Eaton 17221	6.57/8.94	UE	Rockwell H-173	4.88
DP	Eaton 23221	6.17/8.40	JK	Eaton 22121	7.17	UF	Rockwell H-173	5.38
DS	Eaton 17101	4.56	JQ	Eaton 17121	6.57	UH	Rockwell H-173	5.86
E0	Eaton 16244	6.14/8.54	KB	Eaton 22221	6.50/8.86	UJ	Rockwell H-173	6.14
E1	Eaton 16244	5.57/7.75	KE	Spicer M220-T	3.90	UN	Rockwell H-173	4.10
E5	Eaton 16244	7.17/9.97	KK	Eaton 22121	5.29	VA	Rockwell R-170	4.88
E9	Eaton 16244	4.88/6.78	LB	Eaton 22221	7.17/9.77	VH	Eaton 17201	3.70/5.05
EG	Eaton 23121	6.17	MB	Eaton 22221	4.88/6.65	VJ	Eaton 17201	4.11/5.60
EH	Eaton 17221	5.57/7.60	N1	Spicer G175-T	5.57/7.75	VL	Eaton 17201	4.56/6.21
EP	Eaton 23221	6.67/9.08	N2	Spicer G175-T	6.17/8.58	VM	Eaton 17201	4.88/6.65
EQ	Eaton 17121	5.57	N3	Spicer G175-T	6.50/9.04	VN	Eaton 17201	5.29/7.21
ES	Eaton 17101	4.88	N4	Spicer G175-T	7.17/9.97			

*Aluminum Carrier Housing

CY2660-2D

L-SERIES (Continued)

SINGLE REAR AXLE CODES — 1987



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y N60 U 3 H V J00001

EXTERIOR PAINT COLORS					DSO
2K	9A				16
WB	TYPE GVW	BODY	TRANS	AXLE	
147	N60B	JH8	SK	54-V	1987

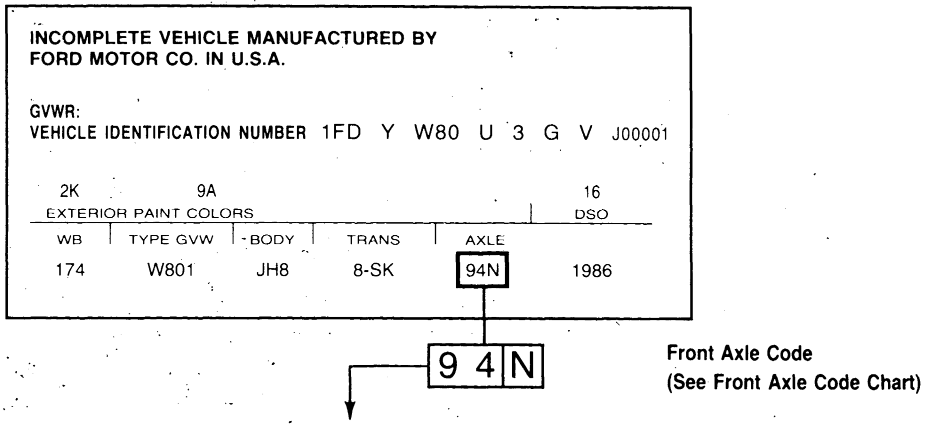
Code	Description	Ratio	Code	Description	Ratio	Code	Description	Ratio
1G	RS-23-160*	3.42	57	RS-17-140	6.43	V4	RS-23-160	3.73
1H	RS-23-160*	3.58	58	RS-17-140	6.83	V5	RS-23-160	3.91
1J	RS-23-160*	3.73	59	RS-17-140	7.17	V6	RS-23-160	4.10
1K	RS-23-160*	3.91	9J	RS-23-180	3.42	V7	RS-23-160	4.30
1M	RS-23-160*	4.10	9K	RS-23-180	3.58	V8	RS-23-160	4.56
2E	RS-20-145	3.91	9M	RS-23-180	3.73	V9	RS-23-160	4.89
2F	RS-20-145	4.10	9N	RS-23-180	3.91	VB	RS-23-160	5.38
2G	RS-20-145	4.56	9P	RS-23-180	4.10	VC	RS-23-160	5.63
2H	RS-20-145	4.88	9Q	RS-23-180	4.30	VD	RS-23-160	6.14
2J	RS-20-145	5.29	9R	RS-23-180	4.56	W5	RS-17-220	3.91/5.45
2K	RS-20-145	5.86	9S	RS-23-180	4.89	W6	RS-17-220	4.10/5.72
2M	RS-20-145	6.43	9U	RS-23-180	5.38	W7	RS-17-220	4.56/6.36
2N	RS-20-145	6.83	9W	RS-23-180	5.63	W8	RS-17-220	4.88/6.80
2P	RS-20-145	7.17	9X	RS-23-180	6.14	W9	RS-17-220	5.38/7.50
3E	RS-20-230	3.91/5.45	AG	Eaton 23121	4.11	WA	RS-17-220	6.50/9.07
3F	RS-20-230	4.10/5.72	AS	Eaton 17101	3.70	WB	RS-17-220	6.83/9.53
3G	RS-20-230	4.56/6.36	BG	Eaton 23121	4.33	WC	RS-17-220	7.17/10.0
3H	RS-20-230	4.88/6.80	BS	Eaton 17101	4.11	X1	RS-23-240	4.10/5.59
3J	RS-20-230	5.38/7.50	C4	RS-23-180*	3.42	X2	RS-23-240	4.30/5.86
3K	RS-20-230	6.50/9.07	C5	RS-23-180*	3.58	X3	RS-23-240	4.56/6.22
3M	RS-20-230	6.83/9.53	C6	RS-23-180*	3.73	X4	RS-23-240	4.88/6.65
3N	RS-20-230	7.17/10.0	C7	RS-23-180*	3.91	X5	RS-23-240	5.38/7.33
51	RS-17-140	3.91	C8	RS-23-180*	4.10	X6	RS-23-240	5.57/7.60
52	RS-17-140	4.10	GG	Eaton 23121	3.70	X7	RS-23-240	6.14/8.38
53	RS-17-140	4.56	JG	Eaton 23121	3.90	X8	RS-23-240	6.50/8.85
54	RS-17-140	4.88	PK	Eaton 22121	4.11	X9	RS-23-240	7.17/9.76
55	RS-17-140	5.29	V1	RS-23-160	3.42			
56	RS-17-140	5.86	V2	RS-23-160	3.58			

*Aluminum Carrier Housing

CY3104-2A

L-SERIES (Continued)

TANDEM REAR AXLE CODES — 1984-1985-1986



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y W80 U 3 G V J00001

EXTERIOR PAINT COLORS					DSO
2K	9A				16
WB	TYPE GVW	BODY	TRANS	AXLE	
174	W801	JH8	8-SK	94N	1986

Front Axle Code
(See Front Axle Code Chart)

TANDEM REAR AXLE CODES

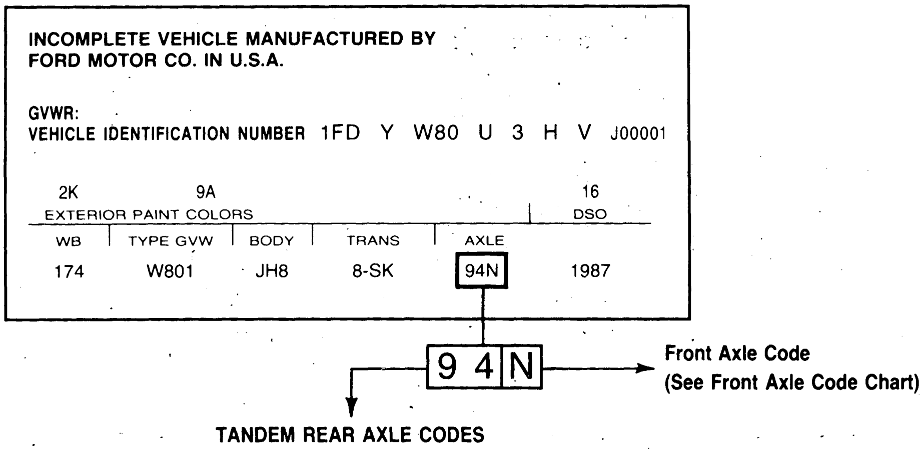
Code	Description	Ratio	Code	Description	Ratio	Code	Description	Ratio
1C	Eaton DS-341	4.11	95	Rockwell SL-100	7.17	TD	Rockwell SQHP	4.63
1L	Eaton DS-381	4.11	9C	Eaton DS-341	6.14	TF	Rockwell SQHP	5.29
1V	Eaton DP-381	5.61	9L	Eaton DS-381	6.14	TL	Eaton DS-381	7.17
1X	Eaton DP-460P	5.31	AU	Eaton DT-341	3.70/5.05	TQ	Rockwell SQHP	3.73
2C	Eaton DS-341	4.33	B2	Rockwell SQ-100	3.55	TR	Rockwell SQHP	4.10
2L	Eaton DS-381	4.33	B3	Rockwell SQ-100	3.73	TV	Eaton DP-381	5.05
2X	Eaton DP-460P	5.90	B4	Rockwell SQ-100	3.90	UL	Eaton DS-381	5.83
3C	Eaton DS-341	3.70	B5	Rockwell SQ-100	4.10	VE	Rockwell SQHP*	3.73
3L	Eaton DS-381	3.70	B6	Rockwell SQ-100	4.33	VF	Rockwell SQHP*	4.10
3X	Eaton DP460P	7.20	B8	Rockwell SQ-100	4.63	W3	Rockwell SQ-100	3.90
3Y	Rockwell SSHD	3.70	B9	Rockwell SQ-100	4.88	W5	Rockwell SQ-100	4.33
4C	Eaton DS-341	3.90	BA	Rockwell SQ-100	5.29	W7	Rockwell SQ-100	4.63
4L	Eaton DS-381	3.90	BB	Rockwell SQ-100	5.86	W8	Rockwell SQ-100	4.88
5C	Eaton DS-341	4.56	BC	Rockwell SQ-100	6.14	W9	Rockwell SQ-100	5.29
5L	Eaton DS-381	4.56	BD	Rockwell SQ-100	6.83	WC	Rockwell SQ-100	6.83
6C	Eaton DS-341	4.88	BE	Rockwell SQ-100	7.17	WF	Rockwell SQ-100	3.73
6L	Eaton DS-381	4.88	BU	Eaton DT-341	4.11/5.61	WG	Rockwell SQ-100	4.10
71	Rockwell SQ-100	6.14	DU	Eaton DT-341	4.56/6.21	WH	Rockwell SQ-100	5.86
72	Rockwell SQ-100	7.17	D3	Rockwell SQ-100*	3.73	WL	Rockwell SL-100	3.90
7C	Eaton DS-341	5.29	D5	Rockwell SQ-100*	4.10	WN	Rockwell SL-100	4.33
7J	Rockwell SSHD	3.91	DX	Eaton DT-401P	4.11/5.61	WQ	Rockwell SL-100	4.63
7K	Rockwell SSHD	4.10	EU	Eaton DT-341	4.88/6.65	WR	Rockwell SL-100	4.88
7L	Eaton DS-381	5.29	EX	Eaton DT-401P	4.33/5.91	WS	Rockwell SL-100	5.29
7M	Rockwell SSHD	4.30	FU	Eaton DT-341	5.29/7.21	WV	Rockwell SL-100	6.83
7Q	Rockwell SSHD	4.56	FX	Eaton DT-401P	4.56/6.21	YB	Rockwell SQ-100P	
7S	Rockwell SSHD	5.38	GU	Eaton DT-341	5.57/7.60	YM	Rockwell SQ-100P	
7W	Rockwell SSHD	6.14	HU	Eaton DT-341	6.14/8.38	YN	Rockwell SQ-100P	
7Y	Rockwell SSHD	5.57	JU	Eaton DT-341	6.50/8.87	YQ	Rockwell SQ-100P	
8C	Eaton DS-341	5.57	KU	Eaton DT-341	7.17/9.77	YR	Rockwell SQ-100P	
8F	Rockwell SQ-100P*	3.73	NX	Eaton DS-460P	3.90	YS	Rockwell SQ-100P	
8J	Rockwell SQ-100P*	4.10	PX	Eaton DS-460P	4.11	YT	Rockwell SQ-100P	
8L	Eaton DS-381	5.57	QX	Eaton DS-460P	4.33	YU	Rockwell SQ-100P	
8Y	Rockwell SSHD	4.88	RC	Eaton DS-341	6.50	YV	Rockwell SQ-100P	
91	Rockwell SL-100	3.73	RX	Eaton DS-460P	4.62	YW	Rockwell SQ-100P	
92	Rockwell SL-100	4.10	SC	Eaton DS-341	7.17	XP	Rockwell SQ-100*	3.73
93	Rockwell SL-100	5.86	SL	Eaton DS-381	6.50	XQ	Rockwell SQ-100*	4.10
94	Rockwell SL-100	6.14	TC	Rockwell SQHP	4.44			

*Aluminum Carrier Housing

CY2661-2D

L-SERIES (Continued)

TANDEM REAR AXLE CODES — 1987



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y W80 U 3 H V J00001

2K	9A					16
EXTERIOR PAINT COLORS						DSO
WB	TYPE GVW	BODY	TRANS	AXLE		
174	W801	JH8	8-SK	94N		1987

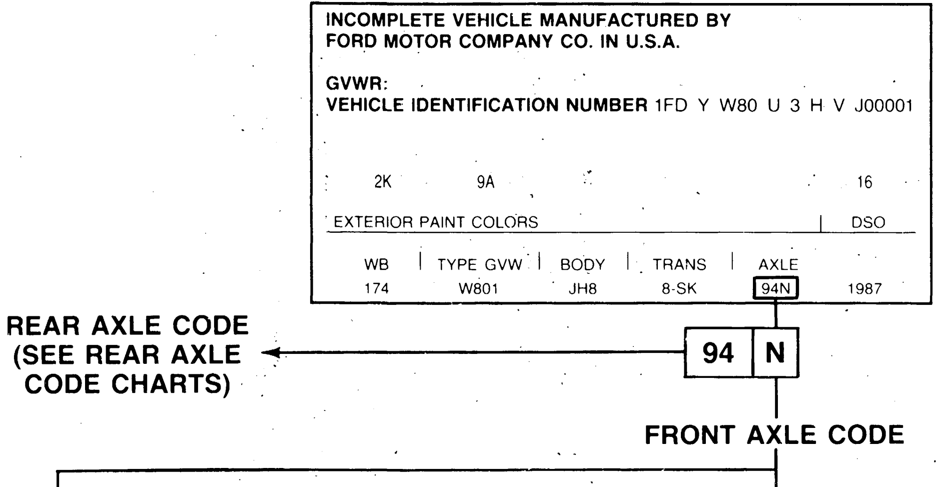
Code	Description	Ratio	Code	Description	Ratio	Code	Description	Ratio
1C	Eaton DS-341	4.11	◆8G	Eaton DS-402	6.14	D3	Rockwell SQ-100*	3.73
1X	Eaton DP460P	5.31	◆8H	Eaton DS-402	6.50	D5	Rockwell SQ-100*	4.10
2C	Eaton DS-341	4.33	8J	Rockwell SQ-100P*	4.10	EU	Eaton DT-341	4.88/6.65
2X	Eaton DP-460P	5.90	◆8K	Eaton DS-402	7.17	EX	Eaton DT-401P	4.33/5.91
3C	Eaton DS-341	3.70	91	Rockwell SL-100	3.73	FU	Eaton DT-341	5.29/7.21
3X	Eaton DP460P	7.20	92	Rockwell SL-100	4.10	NX	Eaton DS-460P	3.90
4C	Eaton DS-341	3.90	93	Rockwell SL-100	5.86	PX	Eaton DS-460P	4.11
5C	Eaton DS-341	4.56	94	Rockwell SL-100	6.14	QX	Eaton DS-460P	4.33
6C	Eaton DS-341	4.88	95	Rockwell SL-100	7.17	RC	Eaton DS-341	6.50
7C	Eaton DS-341	5.29	◆96	Eaton DP-402	5.05	RX	Eaton DS-460P	4.62
7J	Rockwell SSHD	3.91	◆97	Eaton DP-402	5.61	SC	Eaton DS-341	7.17
7K	Rockwell SSHD	4.10	9C	Eaton DS-341	6.14	WL	Rockwell SL-100	3.90
7M	Rockwell SSHD	4.30	AU	Eaton DT-341	3.70/5.05	WN	Rockwell SL-100	4.33
7Q	Rockwell SSHD	4.56	B2	Rockwell SQ-100	3.55	WQ	Rockwell SL-100	4.63
7S	Rockwell SSHD	5.38	B3	Rockwell SQ-100	3.73	WR	Rockwell SL-100	4.88
7W	Rockwell SSHD	6.14	B4	Rockwell SQ-100	3.90	WS	Rockwell SL-100	5.29
7Y	Rockwell SSHD	5.57	B5	Rockwell SQ-100	4.10	WV	Rockwell SL-100	6.83
◆81	Eaton DS-402	3.70	B6	Rockwell SQ-100	4.33	YB	Rockwell SQ-100P	6.14
◆82	Eaton DS-402	3.90	B8	Rockwell SQ-100	4.63	YM	Rockwell SQ-100P	4.63
◆83	Eaton DS-402	4.11	B9	Rockwell SQ-100	4.88	YN	Rockwell SQ-100P	5.86
◆86	Eaton DS-402	4.33	BA	Rockwell SQ-100	5.29	YQ	Rockwell SQ-100P	3.73
◆87	Eaton DS-402	4.56	BB	Rockwell SQ-100	5.86	YR	Rockwell SQ-100P	3.55
◆89	Eaton DS-402	4.88	BC	Rockwell SQ-100	6.14	YS	Rockwell SQ-100P	4.33
◆8B	Eaton DS-402	5.29	BD	Rockwell SQ-100	6.83	YT	Rockwell SQ-100P	4.88
8C	Eaton DS-341	5.57	BE	Rockwell SQ-100	7.17	YU	Rockwell SQ-100P	3.90
◆8D	Eaton DS-402	5.57	BU	Eaton DT-341	4.11/5.61	YV	Rockwell SQ-100P	4.10
◆8E	Eaton DS-402	5.83	DU	Eaton DT-341	4.56/6.21	YW	Rockwell SQ-100P	5.29
8F	Rockwell SQ-100P*	3.73	DX	Eaton DT-401P	4.11/5.61			

*Aluminum Carrier Housing

CY3103-2A

L-SERIES (Continued)

FRONT AXLE CODES
1984-1985-1986-1987



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR COMPANY CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y W80 U 3 H V J00001

2K	9A	16
EXTERIOR PAINT COLORS		DSO

WB	TYPE GVW	BODY	TRANS	AXLE	
174	W801	JH8	8-SK	94N	1987

FRONT AXLE CODES

Code		Description	Code		Description
Manual	Power		Manual	Power	
—	3	13,100 lb.	—	G*	12,000 lb.
4	M	7000 lb.	H	—	12,000 lb. w Steer-Ease
5	N	9000 lb.			
6	O	9500 lb.	—	I*	12,000 lb.
7	P	12,000 lb.	—	S	16,000 lb.
8	V	6000 lb.	—	T	18,000 lb.
9	W	8000 lb.	—	U	20,000 lb.
E	D	12,000 lb. Alum.	X*	—	12,000 lb.
			Z*	—	12,000 lb.
F	—	12,000 lb. Alum. w/Steer-Ease			

*With greaseable drag link and tie rods.

1985 FRONT AXLE CODES

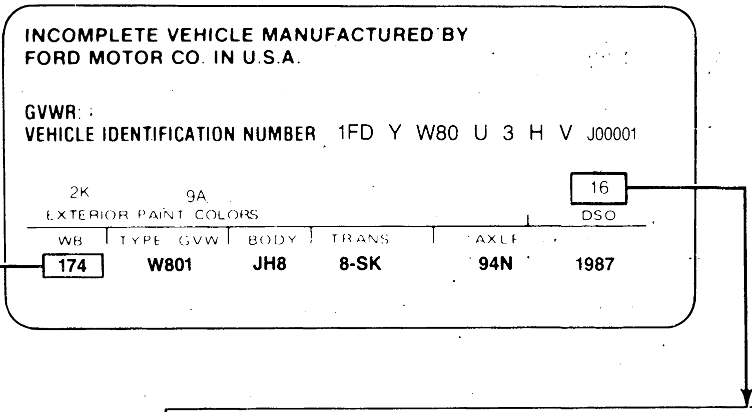
Code	Axle	Strg.	Code	Axle	Strg.
3	11,000 lb. Steel	Manual	L	11,000 lb. Steel	Power
4	7,000 lb. Steel	Manual	M	7,000 lb. Steel	Power
5	9,000 lb. Steel	Manual	N	9,000 lb. Steel	Power
6	10,000 lb. Steel	Manual	O	10,000 lb. Steel	Power
8	6,000 lb. Steel	Manual	P	12,000 lb. Steel	Power
9	8,000 lb. Steel	Manual	S	16,000 lb. Steel	Power
A	10,000 lb. Steel	Power ①	T	18,000 lb. Steel	Power
C	11,000 lb. Steel	Power ①	U	20,000 lb. Steel	Power
E	12,000 lb. Alum.	Power	V	6,000 lb. Steel	Power
F	12,000 lb. Alum.	Manual	W	8,000 lb. Steel	Power
G	12,000 lb. Steel	Power ①	X	12,000 lb. Steel	Manual ①
H	12,000 lb. Steel	Manual	Y	11,000 lb. Steel	Manual ①
I	12,000 lb. Alum.	Power ①	Z	12,000 lb. Alum.	Manual ①
J	10,000 lb. Steel	Manual ①			

① With greasable drag link and tie rods

CY2791-2C

L-SERIES (Continued)

DISTRICT SALES OFFICE (DSO) AND WHEELBASE (WB) CODES 1983-1984-1985-1986-1987



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER 1FD Y W80 U 3 H V J00001

2K	9A				16
EXTERIOR PAINT COLORS					DSO
WB	TYPE GVW	BODY	TRANS	AXLE	
174	W801	JH8	8-SK	94N	1987

DSO — FSO — PTO (DOMESTIC, FOREIGN AND SPECIAL ORDER)

The D.S.O. space will show a two-digit code number of the district which ordered the unit (see chart below). This code will appear on all units — domestic or export. If unit is built on a D.S.O., E.S.O., P.T.O. (special orders), the complete order number is under the D.S.O. space **after** the district code.

Wheelbase (inches)	
124	184
136	185
138	186
143	202
144	203
148	204
150	220
155	222
162	236
166	246
167	250
174	

Code	District
11	Boston
12	Buffalo
13	New York
14	Pittsburgh
16	Philadelphia
17	Washington
21	Atlanta
22	Charlotte
23	Memphis
24	Jacksonville
26	New Orleans
28	Louisville
41	Chicago
42	Cleveland
43	Milwaukee
46	Indianapolis
47	Cincinnati
48	Detroit

Code	District
52	Dallas
53	Kansas City
54	Omaha
55	St. Louis
57	Houston
58	Twin Cities
71	Los Angeles
72	San Jose
73	Salt Lake City
74	Seattle
75	Phoenix
76	Denver
83	Government
84	Home Office Reserve
85	American Red Cross
86	Recreational Vehicles
87	Body Company
89	Transportation
90's	Export
00	Special

Ford of Canada

Mercury Regions	Ford Regions
A1 Central	B1 Central
A2 Eastern	B2 Eastern
A3 Atlantic	B3 Atlantic
A4 Midwestern	B4 Midwestern
A6 Western	B6 Western
A7 Pacific	B7 Pacific
A8 Great Lakes	B8 Great Lakes
I1 Export	I1 Export

CY2360-2G

LIGHT/MEDIUM/HEAVY

General Information—Light Truck

E-150—E-250—E-350, F-150—F-250—F-350 and Bronco

Vehicle Safety Compliance Certification Label

The English Safety Compliance Certification Label is attached to the drivers door lock pillar. The French Safety Compliance Certification Label is attached to the door latch edge on the passenger side door. The label contains the name of the manufacturer, the month and year of manufacture, the certification statement, and the Vehicle Identification Number. The label also contains Gross Vehicle Weight Ratings, Wheel and Tire data, and information codes for additional vehicle data.

Vehicle Identification Number (VIN)

A seventeen digit combination of numbers and letters forms the Vehicle Identification Number (VIN). The VIN is stamped on a metal tab that is riveted to the instrument panel close to the windshield. The VIN number is viewable by looking through the front windshield on the driver's side. The VIN number is also found on the Safety Compliance Certification Label.

By looking at the seventeen digit VIN number a variety of information about the vehicle can be determined. The first three digits identify the manufacturer and the vehicle make and type. The fourth digit determines the Gross Vehicle Weight Rating (GVWR) Class and Brake System for Ford completed Trucks and MPV's. For Buses and Incompleted Vehicles, the fourth digit determines the brake system (only). Digits five, six and seven identify the model or line, series, chassis, and cab or body type. The eighth digit points out the particular engine found in the vehicle. Digit nine is the VIN check digit. The tenth digit identifies the model year of a Ford-completed vehicle, or the model year of the incomplete vehicle, if sold by Ford as an incomplete vehicle. The eleventh digit determines the assembly plant. Digits twelve through seventeen make up the sequential serial and warranty number. Digit twelve uses the letter "A" until the production or sequence of 99,999 units (digits thirteen through seventeen) is reached. Letter "A" then becomes "B" for the next production sequence of vehicles.

Refer to the code definition portion of this Section for specific definitions of the numbers and letters of the Vehicle Identification Number (VIN).

General Information—Medium/Heavy Truck

Chassis-Cab Certification Label

The Chassis-Cab Certification Label is attached to the rear face of the driver's door or door pillar. The label contains the name of the manufacturer, the month and year of manufacture and the certification statement.

Vehicle Rating Decal

Fig. 5 illustrates a typical Vehicle Rating Decal. On cowl and windshield vehicles, the Rating decal is mounted on the right side of the cowl top panel under the hood. On incomplete vehicles, the rating decal is attached to a booklet (incomplete vehicle manual) and secured to a suitable interior location. On all other vehicles, the Rating decal is mounted on the rear face of the left front door.

LIGHT/MEDIUM/HEAVY (Continued)

Typical Light Truck Safety Compliance Certification Labels and Vehicle Rating Decal

SAFETY COMPLIANCE CERTIFICATION LABELS
COMPLETE VEHICLES

(UNITED STATES)

MFD. BY FORD MOTOR CO. IN U.S.A.

DATE: 2/87 **GVWR:** 4900 LB/2222 KG

FRONT GAWR: 2684 LB		**REAR GAWR:** 3750 LB	
1217 KG	**WITH**	1700 KG	**WITH**
P195/75R15SL	**TIRES**	P195/75R15SL	**TIRES**
15x6.0 JK	**RIMS**	15x6.0 JK	**RIMS**
AT 35 **PSI COLD**		**AT** 35 **PSI COLD**	

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEHICLE IDENTIFICATION NO.

1FTBF15G5 HLA00000

TYPE TRUCK

EXTERIOR PAINT COLORS DSO

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	SPRING

(CANADA)

MFD. BY FORD MOTOR CO. OF CANADA LTD.

DATE: **GVWR:**

FRONT GAWR:		**REAR GAWR:**	
	WITH		**WITH**
	TIRES		**TIRES**
	RIMS		**RIMS**
AT **PSI COLD**		**AT** **PSI COLD**	

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEH. IDENT. NO.

TYPE UTILIZE SAME TYPE DATA AS U.S.A.

EXTERIOR PAINT COLORS DSO

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	SPRING

MADE IN CANADA

(QUEBEC)

FABR. AUX E-U PAR LA FORD MOTOR CO.

DATE: **PNBV:**

PNBE AV:		**PNBE AR:**
	AVEC	
	◂PNEUS▸	
	◂JANTES▸	
A LB/PO² A FROID		**A LB/PO² A FROID**

CE VEHICULE EST CONFORME A TOUTES LES NORMES FEDERALES DE SECURITE DES V.A. EN VIGUEUR A LA DATE DE FABR. INIQUEE CI-DESSUS.

N° D'IDENT. DU VEH.

TYPE

COULEUR N° COMM SPEC.

EMPATT.	TYPE/PBV	CARR	TRANSM.	PONT	BANDE	RESSORT

FOR VEHICLES MFD IN U.S.A. FOR QUEBEC, CANADA

(QUEBEC)

FABR. PAR FORD DU CANADA LIMITEE

DATE: **PNBV:**

PNBE AVANT:		**PNBE ARRIERE:**
	AVEC	
	◂PNEUS▸	
	◂JANTES▸	
A LB/PO² A FROID		**A LB/PO² A FROID**

CE VEHICULE EST CONFORME A TOUTES LES NORMES FEDERALES DE SECURITE DES V.A. EN VIGUEUR A LA DATE DE FABR. INIQUEE CI-DESSUS.

N° D'IDENT. DU VEH.

TYPE

COULEUR N° COMM SPEC

EMPATT	TYPE PBV	CARR	TRANSM	PONT	BANDE	RESSORT

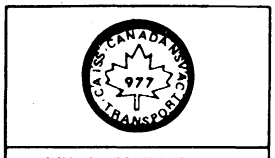
MADE IN CANADA

FOR VEHICLES MFD. IN CANADA FOR QUEBEC, CANADA

INCOMPLETE VEHICLES

THE INCOMPLETE VEHICLE RATING DECAL IS INSTALLED ON THE DRIVER'S DOOR LOCK PILLAR IN PLACE OF THE SAFETY COMPLIANCE CERTIFICATION LABEL.

VEHICLE RATING DECAL



DECAL APPLIED TO ALL CANADIAN BUILT UNITS AND ALL U.S.A. BUILT UNITS SOLD IN CANADA

INCOMPLETE VEHICLE MANUFACTURED BY

GVWR: 3020 LB/1369 KG

VEHICLE IDENTIFICATION NUMBER 1FTBF25G5 GLA00000

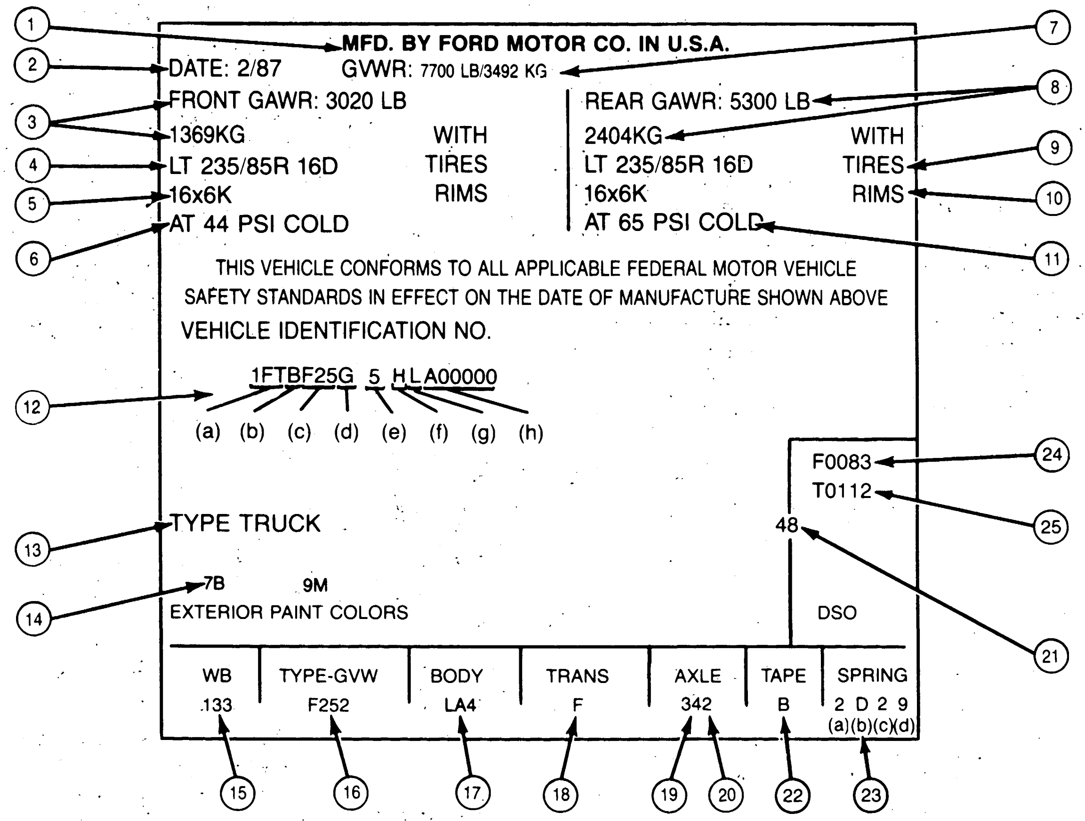
EXTERIOR PAINT COLORS 51 48 DSO

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	SPRING 2D29
133	F270	AB4	F	38	B	1986

CY2666-2D

LIGHT/MEDIUM/HEAVY (Continued)

Typical Light Truck Safety Compliance Certification Label



① Name and Location of Manufacturer

② Date of Manufacture

③ Front Gross Axle Weight Ratings in Pounds (LB) and Kilograms (KG)

④ Front Tire Size

⑤ Rim Size

⑥ Front Tire Cold PSI

⑦ Gross Vehicle Weight Rating in Pounds (LB) and Kilograms (KG)

⑧ Rear Gross Axle Weight Rating in Pounds (LB) and Kilograms (KG)

⑨ Rear Tire Size

⑩ Rim Size

⑪ Rear Tire Cold PSI

⑫ Vehicle Identification Number
- (a) World Manufacturer Identifier
- (b) Brake System and Gross Vehicle Weight Rating (GVWR) Class for Ford completed Trucks and MPV's. For Buses and Incomplete Vehicles, the fourth digit determines the brake system (only).
- (c) Model or Line, Series, Chassis, Cab or Body Type
- (d) Engine Type
- (e) Check Digit
- (f) Model Year (Ford-Complete Trucks and MPV's)
- (g) Assembly Plant Code
- (h) Sequence Number

⑬ Type Vehicle

⑭ Exterior Paint Codes (two sets of figures designates a two-tone)

⑮ Wheelbase in Inches

⑯ Model Code and GVW

⑰ Interior Trim, Seat and Body/Cab Type

⑱ Transmission Code

⑲ Rear Axle Code

⑳ Front Axle Code if so Equipped

㉑ District/Special Order Codes

㉒ External Body Tape Stripe Code

㉓ Suspension Identification Codes
- (a) Aux./Opt. Usage Code (Front)
- (b) Front Spring Code
- (c) Aux./Opt. Usage Code (Rear)
- (d) Rear Spring Code

㉔ Front Axle Accessory Reserve Capacity in Pounds

㉕ Total Accessory Reserve Capacity in Pounds

CW1017-2U

LIGHT/MEDIUM/HEAVY (Continued)

Vehicle Identification Number (VIN)

A seventeen digit combination of numbers and letters form the Vehicle Identification Number (VIN). The VIN is located in the center area of the Vehicle Rating Decal.

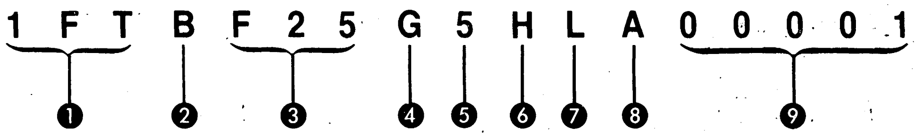
By looking at the seventeen digit VIN number a variety of information about the vehicle can be determined. The first three digits identify the manufacturer and the vehicle make and type. The fourth digit determines the type of brake system (air or hydraulic) and the Gross Vehicle Weight Rating (GVWR) Class for Trucks (complete vehicles); Brake System (only) for Incomplete Vehicles. Digits five, six and seven identify the model or line, series, chassis and cab type. The eighth digit points out the particular engine and type (gas or diesel) found in the vehicle. Digit nine is the VIN check digit. The tenth digit identifies the model year of a Ford completed vehicle, or the model year of the incomplete vehicle, if sold by Ford as an incomplete vehicle. The eleventh digit determines the assembly plant. Digits twelve through seventeen make up the sequential serial and warranty number. Digit twelve uses the letter "A" until the production or sequence of 99,999 units (digits thirteen through seventeen) is reached. Letter "A" then becomes "B" for the next production sequence of vehicles.

Refer to Illustration to help in further explanation of the Vehicle Identification Number (VIN).

Refer to the code definition portion of this Section for specific definitions of the numbers and letters of the Vehicle Identification Number (VIN).

Typical Vehicle Identification Numbers (VIN)

SAMPLE VIN NUMBER



❶ Position 1, 2 and 3 — Manufacturer, Make and Type (World Manufacturer Identifier)

❷ Position 4 — Brakes System/GVWR Class for Ford-completed Trucks and MPV's. For Buses and Incomplete Vehicles, Brake System (only).

❸ Position 5, 6 and 7 — Model or Line, Series, Chassis, Cab or Body Type

❹ Position 8 — Engine Type

❺ Position 9 — Check Digit

❻ Position 10 — Model Year (Ford-completed vehicles)

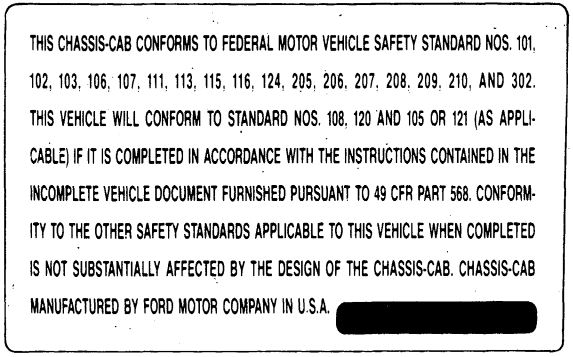
❼ Position 11 — Assembly Plant

❽ Position 12 — Constant "A" until sequence number of 99,999 is reached, then changes to a constant "B" and so on

❾ Position 13 through 17 — Sequence number — begins at 00001

CY2376-2F

Medium/Heavy Truck Chassis-Cab Certification Label



THIS CHASSIS-CAB CONFORMS TO FEDERAL MOTOR VEHICLE SAFETY STANDARD NOS. 101, 102, 103, 106, 107, 111, 113, 115, 116, 124, 205, 206, 207, 208, 209, 210, AND 302. THIS VEHICLE WILL CONFORM TO STANDARD NOS. 108, 120 AND 105 OR 121 (AS APPLICABLE) IF IT IS COMPLETED IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE INCOMPLETE VEHICLE DOCUMENT FURNISHED PURSUANT TO 49 CFR PART 568. CONFORMITY TO THE OTHER SAFETY STANDARDS APPLICABLE TO THIS VEHICLE WHEN COMPLETED IS NOT SUBSTANTIALLY AFFECTED BY THE DESIGN OF THE CHASSIS-CAB. CHASSIS-CAB MANUFACTURED BY FORD MOTOR COMPANY IN U.S.A. [redacted]

A10416-1A

LIGHT/MEDIUM/HEAVY (Continued)

Build Date Stamp Locations

The vehicle build date stamp is located as follows: On Bronco, Light Trucks (F-150—F-250—F-350), the vehicle build date is stamped on the front surface of the radiator support on the passengers side of the vehicle. On Econoline vehicles (E-150—E-250—E-350), the build date is stamped on top of the radiator support. Following is a sample of the four digit number that indicates the month and day of build:

Actual Date of Build	**Date Stamp on Vehicle**
January 24	**0124**
October 21	**1021**

Yellow ink is used for the date stamp. When the marking surface is painted the body color, the date stamp will be marked in red ink. Units from the Ontario Truck Plant (Code C) will be marked with silver ink.

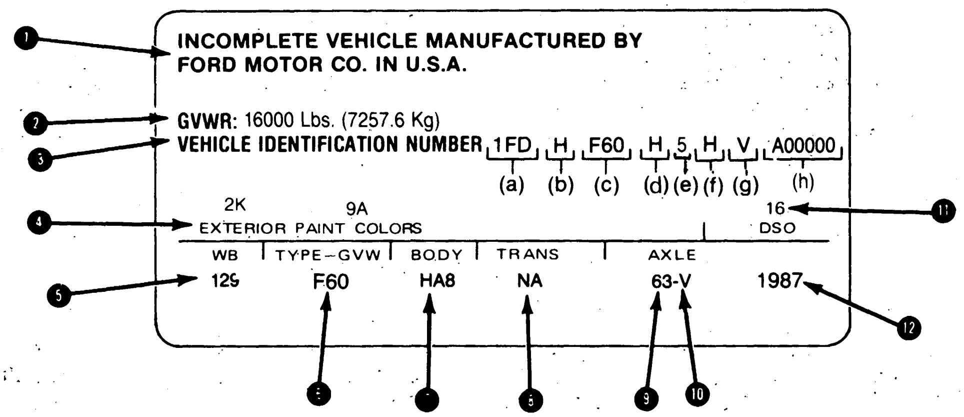
Vehicle Data

The Vehicle Data appears on the Safety Compliance Certification Label for Light Trucks, and on the Vehicle Rating Decal for Medium and Heavy Trucks on the two lines following the identification number. The code set (two numbers or a number and letter) above COLOR identify the exterior paint color (two sets of codes designate a two-tone). The three digits under W.B. designate the wheelbase in inches. The letter and three digits under TYPE/G.V.W. designate the truck model within a series and the gross vehicle weight rating. The letters and/or numeral under BODY designate the interior trim, seat and body type. The transmission installed in the vehicle is identified under TRANS by an alphabetical code (if two symbols appear, the first identifies the auxiliary transmission, if so equipped, and the second symbol identifies the main transmission). A letter and a number or two numbers under AXLE identify the rear axle ratio (when required, a letter is also stamped after the rear axle code to identify the front axle). On Light Trucks the letters and/or numerals under TAPE designate the external bodyside tape stripe. The spring usage Codes for the Vehicle is identified under SPRING.

A two-digit number is stamped above D.S.O. to identify the district which ordered the vehicle. If the vehicle is built to special order (Domestic Special Order, Foreign Special Order, Limited Production Option, or other special order), the complete order number will also appear above D.S.O. The vehicle model year appears in the lower right corner area of the decal under D.S.O. for Medium and Heavy Trucks. The following charts list the various vehicle data codes.

LIGHT/MEDIUM/HEAVY (Continued)

Typical Medium/Heavy Truck Vehicle Rating Decal

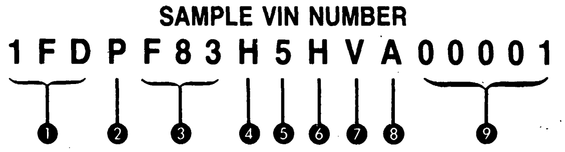


INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.
GVWR: 16000 Lbs. (7257.6 Kg)
VEHICLE IDENTIFICATION NUMBER 1FD H F60 H 5 H V A00000
(a) (b) (c) (d) (e) (f) (g) (h)
2K 9A 16
EXTERIOR PAINT COLORS DSO
WB TYPE–GVW BODY TRANS AXLE
129 F60 HA8 NA 63-V 1987
1
2
3
4
5
9
10
11
12

❶ Name and Location of Manufacturer
❷ Gross Vehicle Weight Rating in Pounds (LB) and Kilograms (KG)
❸ Vehicle Identification Number
  (a) World Manufacturer Identifier
  (b) Brake System and Gross Vehicle Weight Rating (GVWR) Class for Trucks (complete vehicles); Brake System (only) for Incomplete Vehicles
  (c) Model or Line, Series, Chassis and Cab Type
  (d) Engine Type
  (e) Check Digit
  (f) Model Year (Ford — completed vehicles)
  (g) Assembly Plant Code
  (h) Sequential Serial Number
❹ Exterior Paint Codes (Two sets of figures designates a two-tone)
❺ Wheelbase in Inches
❻ Model Code
❼ Interior Trim, Seat and Body/Cab Type
❽ Transmission Code
❾ Rear Axle Code
❿ Front Axle Code
⓫ District/Special Order Codes
⓬ Vehicle Model Year

CA5085-2H

Vehicle Identification Numbers (VIN)



❶ Positions 1, 2 and 3 — Manufacturer, Make and Type (World Manufacturer Identifier)
❷ Position 4 — Brake System GVWR Class for Trucks and MPV's (complete vehicles); Brake System (only) for Incomplete Vehicles and Buses.
❸ Positions 5, 6 and 7 — Model or Line, Series, Chassis, Cab Type
❹ Position 8 — Engine Type
❺ Position 9 — Check Digit
❻ Position 10 — Model Year (Ford — completed vehicles)
❼ Position 11 — Assembly Plant
❽ Position 12 — Constant "A" until sequence number of 99,999 is reached, then changes to a constant "B" and so on.
❾ Positions 13 through 17 — Sequence number — begins at 00001

CY2395-2F

LIGHT/MEDIUM/HEAVY (Continued)

VEHICLE IDENTIFICATION NUMBER (VIN) CODES

WORLD MANUFACTURER IDENTIFIER
(VIN POSITIONS 1, 2 AND 3)

Light Truck

1FT B F25G5HLA00001

Medium/Heavy Truck

1FD PF83H5HVA00001

VIN Code	Manufacturer	Make	Type
1FM	Ford Motor Company, USA	Ford	Multi-Purpose Passenger Vehicle (MPV)
1FT	Ford Motor Company, USA	Ford	Truck (Complete Vehicle)
1FD	Ford Motor Company, USA	Ford	Incomplete Vehicle (IV)
1FC	Ford Motor Company, USA	Ford	Basic (Stripped) Chassis
1FB	Ford Motor Company, USA	Ford	Bus
1FF	Ford Motor Company, USA	Ford	Motor Vehicle Equipment without Engine/ Powertrain (Glider)
2FM	Ford Motor Company of Canada, Ltd.	Ford	MPV
2FT	Ford Motor Company of Canada, Ltd.	Ford	Truck (Complete Vehicle)
2FD	Ford Motor Company of Canada, Ltd.	Ford	Incomplete Vehicle
2FC	Ford Motor Company of Canada, Ltd.	Ford	Basic (Stripped) Chassis
2FB	Ford Motor Company of Canada, Ltd.	Ford	Bus
2FF	Ford Motor Company of Canada, Ltd.	Ford	Motor Vehicle Equipment without Engine/ Powertrain (Glider)

CY2411-2F

LIGHT/MEDIUM/HEAVY (Continued)

BRAKE SYSTEM AND GVWR CLASS FOR TRUCKS AND MPV'S — BRAKE SYSTEM (ONLY) FOR BUSES AND INCOMPLETE VEHICLES (VIN POSITION 4)

Light Truck

IFT $\boxed{B}$ F25G5HLA00001

Medium/Heavy Truck

IFD $\boxed{P}$ F83H5HVA00001

Brake System	GVWR Class	GVWR Range	VIN Code
Hydraulic	Class A	Not greater than 3,000 pounds	A
Hydraulic	Class B	3,001-4,000 pounds	B
Hydraulic	Class C	4,001-5,000 pounds	C
Hydraulic	Class D	5,001-6,000 pounds	D
Hydraulic	Class E	6,001-7,000 pounds	E
Hydraulic	Class F	7,001-8,000 pounds	F
Hydraulic	Class G	8,001-8,500 pounds	G
Hydraulic	Class G	8,501-9,000 pounds	H
Hydraulic	Class H	9,001-10,000 pounds	J
Hydraulic	Class 3	10,001-14,000 pounds	K
Hydraulic	Class 4	14,001-16,000 pounds	L
Hydraulic	Class 5	16,001-19,500 pounds	M
Hydraulic	Class 6	19,501-26,000 pounds	N
Hydraulic	Class 7	26,001-33,000 pounds	P
Hydraulic	Class 8	33,001-55,000 pounds	R
Hydraulic	Class 8	55,001 pounds and over	S
Air	Class 3	10,001-14,000 pounds	T
Air	Class 4	14,001-16,000 pounds	U
Air	Class 5	16,001-19,500 pounds	V
Air	Class 6	19,501-26,000 pounds	W
Air	Class 7	26,001-33,000 pounds	X
Air	Class 8	33,001-55,000 pounds	Y
Air	Class 8	55,001 pounds and over	Z

CY2667-2D

LIGHT/MEDIUM/HEAVY (Continued)

MODEL OR LINE, SERIES, CHASSIS, CAB OR BODY TYPE
(VIN POSITIONS 5, 6, AND 7)

1FTB F25 G5HLA00001

VIN Code		Line	Series	ChassisType	Cab or Body Type	Vehicle Type ①
Club Wagon	**Super Wagon**					
E11	—	Club Wagon XL	E150	4x2	Club Wagon	MPV
E21	—	Club Wagon XL	E250	4x2	Club Wagon	MPV or Bus ⓐ
—	S31	Club Wagon XL	E350	4x2	Super Wagon	MPV or Bus ⓐ

Memo: One of the following optional exterior nameplates (indicating different trim levels) may also be affixed to the vehicle in addition to the Club Wagon XL nameplate:
•XLT • ⓐExcludes School Bus

Regular Van	**Super Van**					
E14	S14	Econoline	E150	4x2	Cargo Van — Regular Van/Super Van	Truck, or IV
E15	S15	Econoline	E150	4x2	Window Van — Regular Van/Super Van	Truck, or IV
E24	S24	Econoline	E250	4x2	Cargo Van — Regular Van/Super Van	Truck, or IV
E25	S25	Econoline	E250	4x2	Window Van — Regular Van/Super Van	Truck, or IV
E34	S34	Econoline	E350	4x2	Cargo Van — Regular Van/Super Van	Truck, or IV
E35	S35	Econoline	E350	4x2	Window Van — Regular Van/Super Van	Truck, or IV
Other						
E37	—	Econoline	E350	4x2	Commercial Cutaway	IV
E39	—	Econoline	E350	4x2	Commercial Basic (Stripped) Chassis	IV
E30	—	Econoline	E350	4x2	RV Cutaway	IV
E33	—	Econoline	E350	4x2	RV Basic (Stripped) Chassis	IV

①"MPV" means Multi-Purpose Vehicle. "IV" means Incomplete Vehicle. "Truck" means Complete Vehicle.
Memo: For all Econoline except Basic (Stripped) Chassis, the optional exterior nameplate "XL" (indicating trim level) may also be affixed to the vehicle in addition to the Econoline nameplate.
Note: All 1987 model Commercial and RV Basic (Stripped) Chassis incomplete vehicles are designated by a "1FC" World Manfacturer Identifier (WMI) code. The RV Basic (Stripped) Chassis is available only on a Special Order Basis.

VIN Code	Line	Series	Chassis Type	Cab or Body Type	Vehicle Type ①
U15	Bronco	U150	4x4	Bronco	MPV

Memo: One of the following optional exterior nameplates (indicating higher trim levels) may also be affixed to the vehicle in addition to the Bronco nameplate:
• XLT • Eddie Bauer

Regular Cab	**Super Cab or Crew Cab**					
F14	X14	F-Series	F150	4x4	Pickup — Regular Cab/Super Cab	Truck
F15	X15	F-Series	F150	4x2	Pickup — Regular Cab/Super Cab	Truck
F25	X25	F-Series	F250	4x2	Pickup — Regular Cab/Super Cab	Truck
F26	X26	F-Series	F250	4x4	Pickup — Regular Cab/Super Cab	Truck
F35	W35	F-Series	F350	4x2	Pickup — Regular Cab/Crew Cab	Truck
F37	—	F-Series	F350	4x2	Regular Cab (Chassis Cab)	IV
F36	W36	F-Series	F350	4x4	Pickup — Regular Cab/Crew Cab	Truck
F38	—	F-Series	F350	4x4	Regular Cab (Chassis Cab)	IV

① "MPV" means Multi-Purpose Passenger Vehicle. "IV" means Incomplete Vehicle.
Memo: One of the following optional exterior nameplates (indicating higher trim levels) may also be affixed to the vehicle in addition to the F-Series nameplates:
• XL • XLT Lariat • Explorer (excluding Crew Cab and Chassis Cab)
Note: Special Order (DSO) units will be coded with the appropriate series VIN codes listed above.

CY2379-2F

LIGHT/MEDIUM/HEAVY (Continued)

MODEL OR LINE, SERIES, CHASSIS, CAB TYPE
(VIN POSITIONS 5, 6 AND 7)

1FDP F83 H5HVA00001

VIN Code	Description
B60	B-600. Chassis Cowl. Gas Engine
B70	B-700. Chassis Cowl. Gas Engine
D80	C-8000. Chassis Cab. Diesel Engine
D84	C-800. Chassis Cab. 8.2L Diesel Engine
F60	F-600. Chassis Cab. Gas Engine
F61	F-600. Chassis Cowl. Gas Engine
F70	F-700. Chassis Cab. Gas Engine
F71	F-700. Chassis Cowl. Gas Engine
F77	F-700 (4x4). Chassis Cab. Gas Engine
F82	F-800. Chassis Cab. Gas Engine
F83	F-800. Chassis Cowl. Gas Engine
G80	FT-800. Chassis Cab. Gas Engine
H81	CT-8000. Chassis Cab. Diesel Engine
J64	B-600. Chassis Cowl. 8.2L Diesel Engine
J65	B-600 Chassis Cowl Diesel Engine
J70	B-7000. Chassis Cowl. Diesel Engine
J74	B-700. Chassis Cowl. 8.2L Diesel Engine
J75	B-700 Chassis Cowl. Ford Diesel Engine
K64	F-600. Chassis Cab. 8.2L Diesel Engine
K65	F-600. Chassis Cowl. 8.2L Diesel Engine
K70	F-7000. Chassis Cab. Diesel Engine
K71	F-7000. Chassis Cowl. Diesel Engine
K72	F-7000 (4x4). Chassis Cab. Diesel Engine
K74	F-700. Chassis Cab. 8.2L Diesel Engine
K75	F-700. Chassis Cowl. 8.2L Diesel Engine
K77	F-700 (4x4). Chassis Cab. 8.2L Diesel Engine
K84	F-800. Chassis Cab. 8.2L Diesel Engine
K85	F-800. Chassis Cowl. 8.2L Diesel Engine
K87	F-8000. Chassis Cab. Diesel Engine
K89	F-8000. Chassis Cowl. Diesel Engine
L80	FT-8000. Chassis Cab. Diesel Engine
L90	FT-900. Chassis Cab. 8.2L Diesel Engine
T64	F-600. Chassis Cab. Ford Diesel Engine
T65	F-600. Chassis Cowl. Ford Diesel Engine
T74	F-700. Chassis Cab. Ford Diesel Engine
T75	F-700. Chassis Cowl. Ford Diesel Engine
T84	F-800. Chassis Cab. Ford Diesel Engine
T85	F-800. Chassis Cowl. Ford Diesel Engine
T90	FT-900. Chassis Cab. Ford Diesel Engine

CY2398-2F

LIGHT/MEDIUM/HEAVY (Continued)

ENGINE TYPE, DISPLACEMENT, CYLINDERS, FUEL TYPE, AND MANUFACTURER (VIN POSITION 8)

Light Truck **Medium/Heavy Truck**

1FTBF25 $\boxed{G}$ 5HLA00001 1FDPF83 $\boxed{H}$ 5HVA00001

GASOLINE ENGINES

VIN Code	Displacement		Cylinders	Fuel	Manufacturer
	Liter	CID			
Y	4.9	300-1V	6	Gas	Ford
H	5.8 (4V)	351	8	Gas	Ford
N	5.0 EFI	302	8	Gas	Ford
L	7.5	460-4V	8	Gas	Ford
H	6.1	370	8	Gas	Ford
7	6.1	370	8	LP Gas	Ford
K	7.0	429	8	Gas	Ford
8	7.0	429	8	LP Gas	Ford

DIESEL ENGINES

VIN Code	Displacement		Cylinders	Basic Model No.	Manufacturer
	Liter	CID			
P	6.6	403	6	6.6L	Ford
1	6.9	421	8	—	Navistar
A	7.8	474	6	7.8L	Ford
N	8.2	500	8	8.2L	Detroit Diesel
U	10.4	636	8	3208	Caterpillar

Delete Engine

0 (Zero) DSO Glider. Delete Engine on motor vehicle equipment only.

CY2415-2F

CHECK DIGIT FOR ALL VEHICLES (VIN POSITION 9)

1FTBF25G $\boxed{5}$ HLA00001 1FDPF83H $\boxed{5}$ HVA00001

Light Truck **Medium/Heavy Truck**

CY2589-2E

VEHICLE MODEL YEAR FOR FORD-COMPLETED VEHICLES (VIN POSITION 10)

Light Truck **Medium/Heavy Truck**

1FTBF25G5 $\boxed{H}$ LA00001 1FDPF83H5 $\boxed{H}$ VA00001

VIN Code	Year
H	1987
J	1988
K	1989
L	1990

CY2590-2E

LIGHT/MEDIUM/HEAVY (Continued)

ASSEMBLY
PLANT
(VIN POSITION 11)

Light Truck

1FTBF25G5H L A00001

Medium/Heavy Truck

1FDPF83H5H V A00001

VIN Code	Vehicle Assembly Plant Name: Location
C	Ontario Truck: Oakville, Ontario
H	Lorain: Lorain, Ohio
K	Kansas City: Claycomo, Missouri
L	Michigan Truck: Wayne, Michigan
N	Norfolk: Norfolk, Virginia
P	Twin Cities: St. Paul, Minnesota
U	Louisville: Louisville, Kentucky
V	Kentucky Truck: Jefferson County, Kentucky
Z	St. Louis: Hazelwood, Missouri
D	Ipiranda (Brazil)

CY2591-2E

PRODUCTION SEQUENCE NUMBER
(VIN POSITIONS 12 THROUGH 17)

Light Truck

1FTBF25G5HL A00001

SEQUENCE NUMBER
A 00001 — A 99,999 B 00001 — B 99,999 and so on.

Medium/Heavy Truck

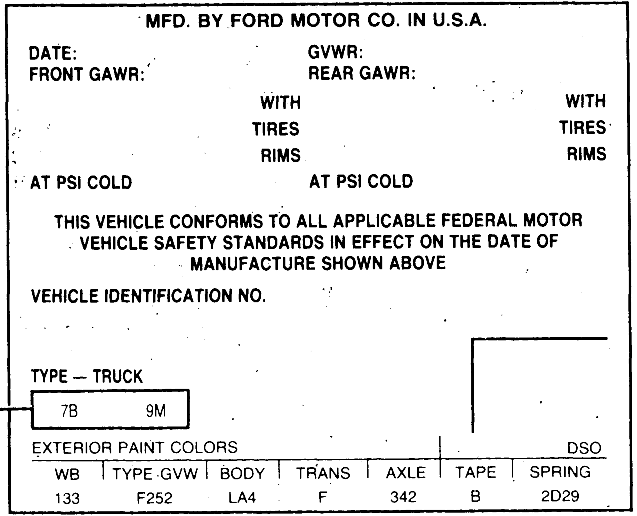
1FPDF83H5HV A00001

SEQUENCE NUMBER
A 00001 — A 99,999 B 00001 — B 99,999 and so on.

CY2592-2E

LIGHT/MEDIUM/HEAVY (Continued)

EXTERIOR PAINT COLOR CODES
BRONCO, F-150 — F-250 — F-350



MFD. BY FORD MOTOR CO. IN U.S.A.

DATE: GVWR:
FRONT GAWR: REAR GAWR:
WITH WITH
TIRES TIRES
RIMS RIMS
AT PSI COLD AT PSI COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEHICLE IDENTIFICATION NO.

TYPE — TRUCK

7B 9M

EXTERIOR PAINT COLORS DSO

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	SPRING
133	F252	LA4	F	342	B	2D29

BRONCO EXTERIOR PAINT COLOR CODES

Code	Color
1C	Black
1D	Smoke Metallic
1G	Light Smoke Metallic
2E	Light Canyon Red
34	Light Regatta Blue
51	Medium Dark Fire Red
7B	Shadow Blue Metallic
9M	White
9T	Light Chestnut
Fiberglass Roof Colors	
A	Black
B	Blue
H	Desert Tan
W	White

NOTE — TWO SETS OF CODES INDICATE TWO-TONE PAINT

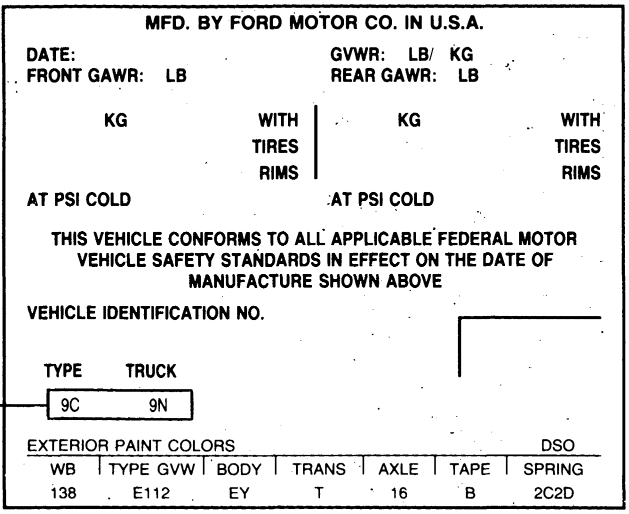
F-150 — F-350 EXTERIOR PAINT COLOR CODES

Code	Color
1C	Black
1D	Smoke Metallic
1G	Light Smoke Metallic
2E	Light Canyon Red
14	Silver Metallic Clearcoat
34	Light Regatta Blue
51	Medium Dark Fire Red
7B	Shadow Blue Metallic
9M	White
9N	Desert Tan Metallic
42	Alpine Green Metallic
9T	Light Chestnut

CY2668-2D

LIGHT/MEDIUM/HEAVY (Continued)

EXTERIOR PAINT COLOR CODES
E-150 — E-250 — E-350



MFD. BY FORD MOTOR CO. IN U.S.A.

DATE: GVWR: LB/ KG

FRONT GAWR: LB REAR GAWR: LB

KG WITH TIRES RIMS | KG WITH TIRES RIMS

AT PSI COLD AT PSI COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEHICLE IDENTIFICATION NO.

TYPE	TRUCK
9C	9N

EXTERIOR PAINT COLORS DSO

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	SPRING
138	E112	EY	T	16	B	2C2D

E-150 — E-350

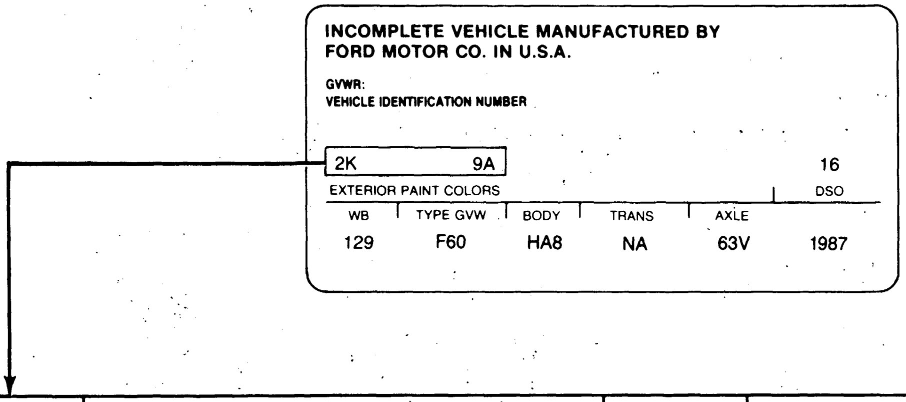
Code	Color
1D	Smoke Metallic
1G	Light Smoke Metallic
3J	Light Regatta Blue Metallic
34	Light Regatta Blue
7B	Shadow Blue Metallic
9M	White
9N	Desert Tan Metallic
51	Medium Dark Fire Red
2C	Medium Canyon Red Metallic
9T	Light Chestnut
9U	Dark Walnut Metallic

NOTE: Two sets of codes indicate two-tone paint

CY2794-2C

LIGHT/MEDIUM/HEAVY (Continued)

EXTERIOR PAINT COLOR CODES
MEDIUM/HEAVY TRUCK — F, B AND C-SERIES



INCOMPLETE VEHICLE MANUFACTURED BY FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER

2K 9A	16
EXTERIOR PAINT COLORS	DSO

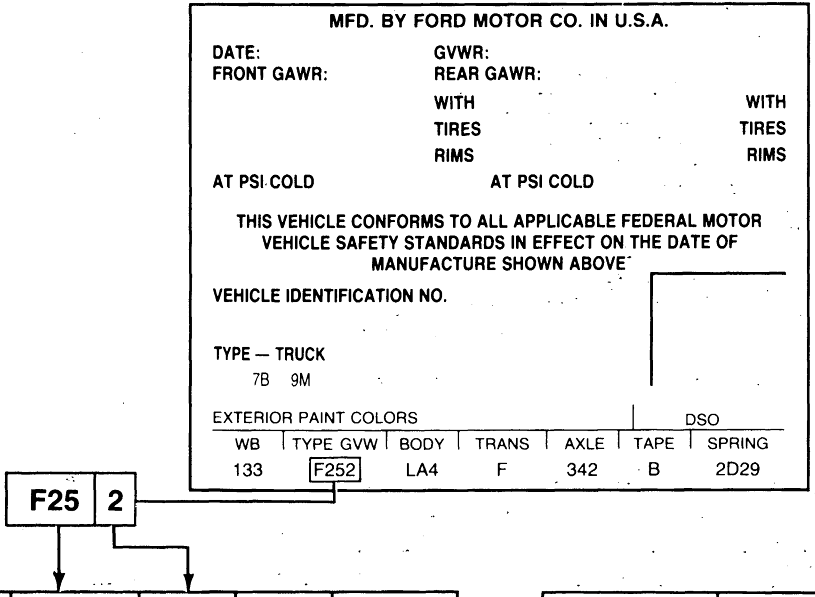
WB	TYPE GVW	BODY	TRANS	AXLE	
129	F60	HA8	NA	63V	1987

Code	Color	Code	Color
1C	Raven Black	67	Yellow
1G	Light Smoke Metallic	7D	Holly Green
2K	Candy Apple Red	9A	Wimbledon White
22	Rangoon Red	9E	Pure White
3T	Bahama Blue	99	Prime
6N	Bright Yellow		

CY2663-2D

LIGHT/MEDIUM/HEAVY (Continued)

TYPE — GROSS VEHICLE WEIGHT (GVW) CODES
BRONCO, F-150 — F-250 — F-350



MFD. BY FORD MOTOR CO. IN U.S.A.

DATE: GVWR:
FRONT GAWR: REAR GAWR:
WITH WITH
TIRES TIRES
RIMS RIMS
AT PSI COLD AT PSI COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEHICLE IDENTIFICATION NO.

TYPE — TRUCK
7B 9M

EXTERIOR PAINT COLORS DSO

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	SPRING
133	F252	LA4	F	342	B	2D29

Series	Series Code	GVWR Code	GVWR (lb.)	Wheelbase (in.)
Bronco				
U150	U15	2	6000	105
		4	6300	105

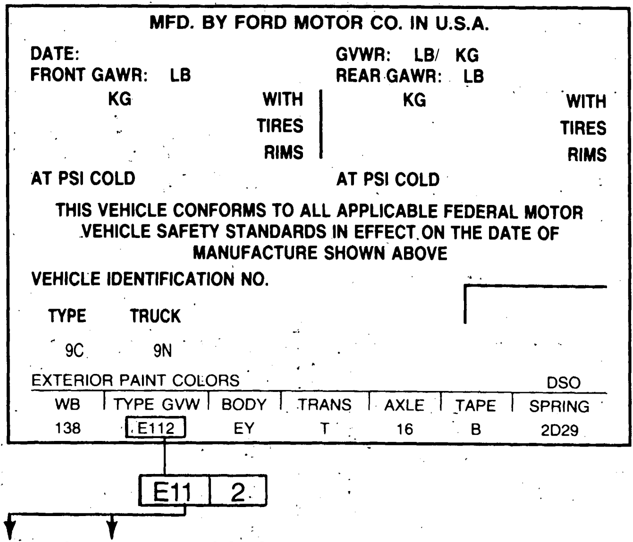
Series	Series Code	GVWR Code	GVWR (lb.)	Wheelbase (in.)
F-150 — F-250 — F-350				
F-150 (4x2)	F15	1	4800	117
	F15	2	4900	133
	F15	3	5250	117
	F15	4	5450	133
	F15	5	6100	133
	X15	1	6050	139
	X15	2	6250	155
F-150 (4x4)	F14	1	6100	117
	F14	2	6250	133
	X14	1	6250	155
F-250 (4x2) Light Duty	F25	1	6300	133
	F25	2	7700	133
F-250 (4x2) Heavy Duty	F25	7	8600	133
	X25	9	8800	155

Series	Series Code	GVWR Code	GVWR (lb.)	Wheelbase (in.)
F-250 (4x4)	F26	1	6600	133
	X26	8	8800	155
	F26	8	8600	133
F-350 (4x2)	F35	2	10,000	133
	F37	4	8800	133
	F37	8	10,000	137, 161
	F37	9	11,000	137, 161
	W35	2	9200	168
	W35	3	10,000	168
F-350 (4x4)	F36	1	9000	133
	F38	2	8800	133
	F38	4	11,000	137
	W36	1	9200	168

CY2669-2D

LIGHT/MEDIUM/HEAVY (Continued)

TYPE — GROSS VEHICLE WEIGHT (GVW) CODES
E-150 — E-250 — E-350



MFD. BY FORD MOTOR CO. IN U.S.A.

DATE: GVWR: LB/ KG
FRONT GAWR: LB REAR GAWR: LB
KG WITH TIRES RIMS KG WITH TIRES RIMS
AT PSI COLD AT PSI COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEHICLE IDENTIFICATION NO.

TYPE	TRUCK
9C	9N

EXTERIOR PAINT COLORS DSO

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	SPRING
138	E112	EY	T	16	B	2D29

E11 2

E-150 — E-350 CLUB — CUSTOM AND CHATEAU WAGONS

Series	Series Code	GVWR Code	GVWR (lb.)
E-150 Conventional	E11	2	6,500
E-250 Conventional	E21	P	8,550
E-350 Super	S31	5	9,100

E-150 — E-350 CARGO VANS

Series	Series Code	GVWR Code	GVWR (lb.)
E-150 Conventional Cargo	E14	1	5,300
	E14	2	6,000
	E14	3	6,400
E-150 Super Cargo	S14	1	6,200
E-250 Conventional Cargo	E24	1	6,900
	E24	2	7,900
E-250 Super Cargo	S24	1	8,100
E-350 Conventional Cargo	E34	1	9,400
E-350 Super Cargo	S34	1	9,000

E-150 — E-350 WINDOW VANS

Series	Series Code	GVWR Code	GVWR (lb.)
E-150 Conventional Window	E15	1	5,500 with 124" W.B. 5,400 with 138" W.B.
	E15	2	6,100
	E15	3	6,500
E-150 Super Window	S15	1	6,200
E-250 Conventional Window	E25	1	7,200
	E25	2	7,900
E-250 Super Window	S25	1	8,100
E-350 Conventional Window	E35	1	9,400
	E35	2	9,500
E-350 Super Window	S35	1	9,000

E-350 REGULAR CUTAWAY VANS

Series	Series Code	GVWR Code	GVWR (lb.)
E-350 Regular Cutaway Van	E30	2	10,500 DR
	E30	3	11,000 DR

SR: Single Rear Wheels
DR: Dual Rear Wheels

E-350 COMMERCIAL CUTAWAY VANS

Series	Series Code	GVWR Code	GVWR (lb.)
E-350 Commercial Cutaway Van	E37	1	10,000 DR
	E37	2	10,300 DR
	E37	3	10,700 DR

SR: Single Rear Wheels
DR: Dual Rear Wheels

E-350 STRIPPED CHASSIS VAN

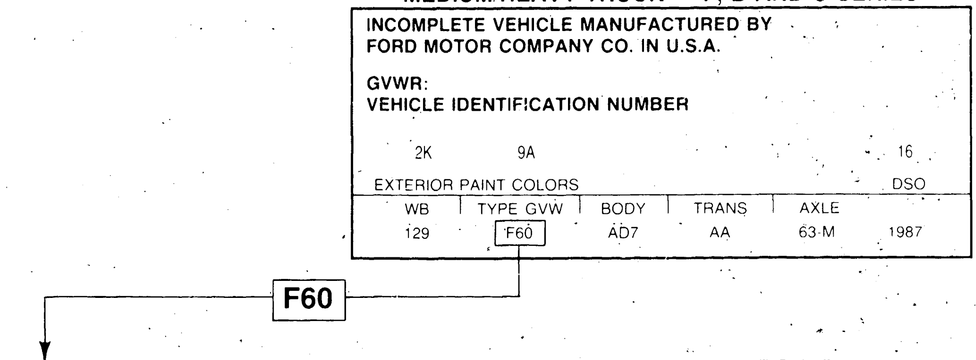
Series	Series Code	GVWR Code	GVWR (lb.)
E-350 Stripped Chassis Van	E39	U	9,200 SR
	E39	W	10,000 DR

SR: Single Rear Wheels
DR: Dual Rear Wheels

CY2779-2C

LIGHT/MEDIUM/HEAVY (Continued)

TYPE — GROSS VEHICLE WEIGHT (GVW) CODES
MEDIUM/HEAVY TRUCK — F, B AND C-SERIES


INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR COMPANY CO. IN U.S.A.
GVWR:
VEHICLE IDENTIFICATION NUMBER
2K
9A
16
EXTERIOR PAINT COLORS
DSO
WB
TYPE GVW
BODY
TRANS
AXLE
129
F60
AD7
AA
63-M
1987
F60

CODE	SERIES	GVWR LB. STANDARD	GVWR LB. MAXIMUM
F60	F600	20,200	22.500
F61	F600	20,200	22.500
K64	F600	20,200	22.500
K65	F600	20,200	22.500
T64	F600	20,200	22.000
T65	F600	20,200	22.000
T74	F700	21,200	28.000
T75	F700	21,200	28.000
F70	F700	21,200	28.000
F71	F700	21,200	28.000
K74	F700	21,200	28.000
K75	F700	21,200	28,000
F77	F700*	24,000	24,000
K72	F7000*	24,000	24,000
K77	F700*	24,000	24,000
K70	F7000	21,200	28,000
K71	F7000	21,200	28.000
F82	F800	23,100	35.000
F83	F800	23,100	35.000
K84	F800	23,100	35.000

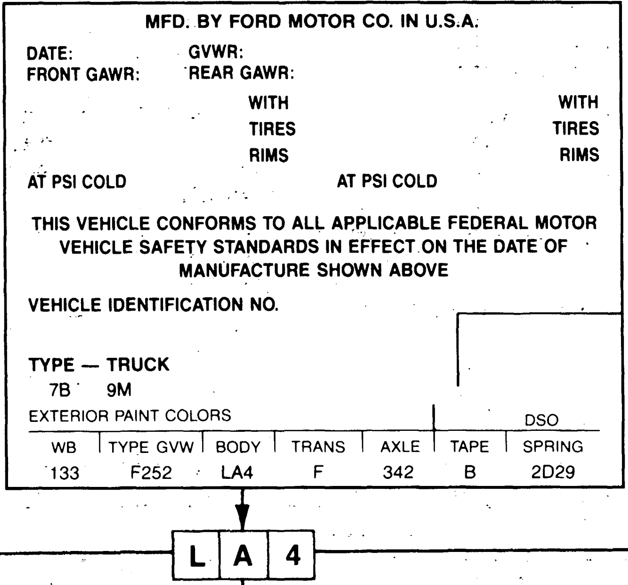
*(4x4)

CODE	SERIES	GVWR LB. STANDARD	GVWR LB. MAXIMUM
K85	F800	23.100	35.000
T84	F800	23.100	35.000
T85	F800	23.100	35.000
K87	F8000	23.100	35.000
K89	F8000	23.100	35.000
G80	FT800	41.500	50.000
L80	FT8000	41.500	50.000
L90	FT900	41.500	50.000
T90	FT900	41.500	50.000
B60	B600	21.000	25.500
J64	B600	21.000	25.500
J65	B600	21.000	25.500
J75	B700	24.100	28.000
B70	B700	24,100	28.000
J74	B700	24.100	28,000
J70	B7000	24.100	28.000
D84	C800	25.100	34,000
D80	C8000	25.100	39.000
H81	CT8000	44.800	56.000

CY2405-2F

LIGHT/MEDIUM/HEAVY (Continued)

BODY CODES — BRONCO, LIGHT TRUCK, (F-150 — F-250 — F-350)



MFD. BY FORD MOTOR CO. IN U.S.A.

DATE: GVWR:
FRONT GAWR: REAR GAWR:

WITH
TIRES
RIMS
AT PSI COLD

WITH
TIRES
RIMS
AT PSI COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEHICLE IDENTIFICATION NO.

TYPE — TRUCK
7B 9M
EXTERIOR PAINT COLORS

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	DSO SPRING
133	F252	LA4	F	342	B	2D29

SEAT TRIM AND STYLE CODES

Code	Description
Bronco	
A	Vinyl Bucket
K	B/Cloth Captain Chair
M	B/Cloth and Vinyl Bucket
L	B/Cloth and Vinyl Bench
H	Cloth — Eddie Bauer Captain Chairs
F-150 — F-350	
B	Vinyl Bench
D	Knit Vinyl Bench
L	B/Cloth and Vinyl Bench
K	B/Cloth Bench
N	Cloth Captain Chair

CAB BODY STYLES

F-150 — F-250 — F-350 and Bronco

Crew Cab Code	Super Cab Code	Regular Code	Style
—	—	3	Flareside Pick-up
D	M	4	Styleside Pick-up
—	—	8	Chassis Cab
—	—	2	Bronco Base
—	—	5	Bronco XLT

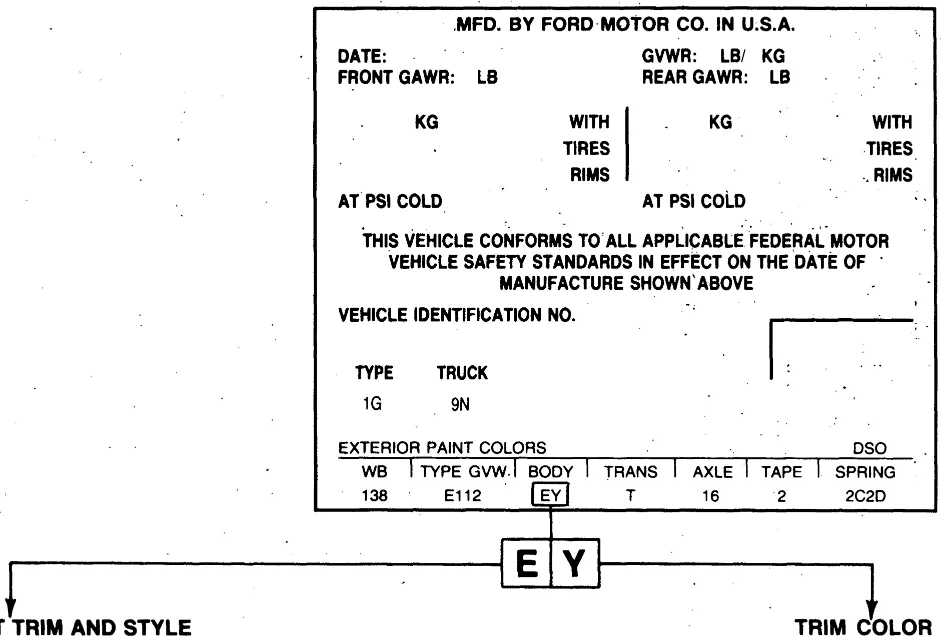
INTERIOR TRIM COLOR CODES

Code	Color
Bronco	
B	Blue
D	Red
K	Chestnut
F-150 — F-350	
G	Smoke
B	Blue
D	Red
G	Smoke
K	Chestnut

CY2388-2F

LIGHT/MEDIUM/HEAVY (Continued)

BODY CODES
E-150 — E-250 — E-350



MFD. BY FORD MOTOR CO. IN U.S.A.

DATE: GVWR: LB/ KG
FRONT GAWR: LB REAR GAWR: LB

KG WITH TIRES RIMS
KG WITH TIRES RIMS

AT PSI COLD AT PSI COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEHICLE IDENTIFICATION NO.

TYPE	TRUCK
1G	9N

EXTERIOR PAINT COLORS DSO

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	SPRING
138	E112	EY	T	16	2	2C2D

SEAT TRIM AND STYLE

Code	Trim	Type
A	Vinyl	Bucket
B	Vinyl	Captain Chair
E	Vinyl	Bucket
F	B/Cloth	Bucket
H	Cloth	Captain Chair

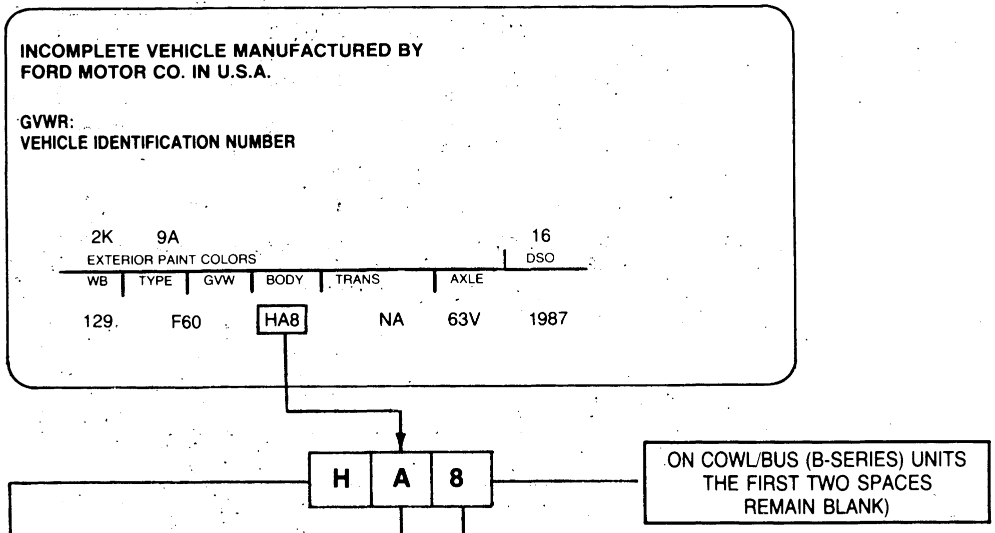
TRIM COLOR

Code	Color
B	Regatta Blue
D	Canyon Red
G	Smoke
K	Chestnut

CY2780-2C

LIGHT/MEDIUM/HEAVY (Continued)

BODY CODES — MEDIUM/HEAVY TRUCK — F, B AND C-SERIES


INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.
GVWR:
VEHICLE IDENTIFICATION NUMBER
2K
9A
EXTERIOR PAINT COLORS
16
DSO
WB
TYPE
GVW
BODY
TRANS
AXLE
129
F60
HA8
NA
63V
1987
H
A
8
ON COWL/BUS (B-SERIES) UNITS THE FIRST TWO SPACES REMAIN BLANK)

SEAT TRIM AND STYLE

All F-Series	
Code	**Trim Type**
B	Heidi Vinyl Bench (Base)
C	Wheaton Polyknit and Vinyl Bench (Custom)
G	Heavy Duty Heidi Vinyl Bench
H	Heidi Vinyl Bucket

All C-Series	
Code	**Trim Type**
E	Biscay Knitted Vinyl and Vinyl Bench (Custom)
F	Heavy Duty Heidi Vinyl Bench (Base)
G	Heidi Vinyl Bucket

CAB/BODY STYLE

Code	Style
6	Chassis Cab, Fire Truck
7	Chassis-Cowl
8	Chassis-Cab
F	Chassis-Cab, Fire Truck with Electric Fuel Pump
G	Chassis-Cowl with Electric Fuel Pump
H	Chassis-Cab with Electric Fuel Pump

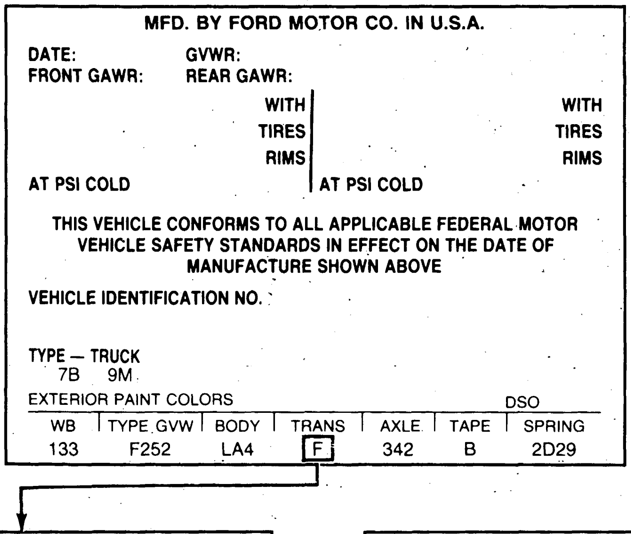
TRIM COLOR

Code	Color
A	Black/Charcoal
K	Chestnut
L	Chestnut/Tan
1	Black w/Red Laser Stripe

CY2406-2F

LIGHT/MEDIUM/HEAVY (Continued)

TRANSMISSION CODES
BRONCO, E-150 — E-250 — E-350, F-150 — F-250 — F-350



MFD. BY FORD MOTOR CO. IN U.S.A.

DATE: **GVWR:**
FRONT GAWR: **REAR GAWR:**

WITH TIRES RIMS AT PSI COLD | **WITH TIRES RIMS AT PSI COLD**

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEHICLE IDENTIFICATION NO.

TYPE — TRUCK
7B 9M

EXTERIOR PAINT COLORS DSO

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	SPRING
133	F252	LA4	F	342	B	2D29

Code	Description
BRONCO	
A	Manual — 4-Speed New Process
B	Manual — 4-Speed Overdrive
F	Manual — 4-Speed Warner
K	Automatic C6
T	Automatic — AOD

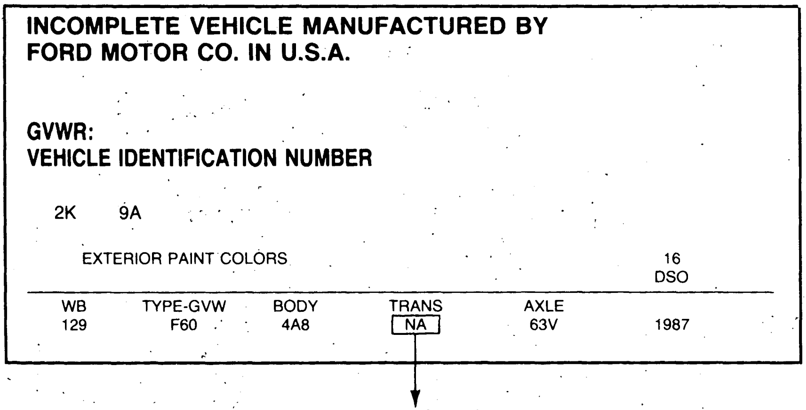
F-150 — F-250 — F-350	
A	Manual — 4-Speed New Process 435
B	Manual — 4-Speed Overdrive
F	Manual — 4-Speed Warner T-18
P	Manual — 4-Speed Warner T-19
C	Manual — 3-Speed Ford
K	Automatic — C6
T	Automatic — AOD
W	Automatic — C5

E-150 — E-250 — E-350	
A	Manual — 4-Speed New Process
B	Manual — 4-Speed Overdrive (SROD)
G	Automatic — C6
T	Automatic 4-Speed AOD

CY2390-2F

LIGHT/MEDIUM/HEAVY (Continued)

TRANSMISSION CODES
MEDIUM/HEAVY TRUCK — F-, B- AND C-SERIES



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER

2K 9A

EXTERIOR PAINT COLORS 16
DSO

WB	TYPE-GVW	BODY	TRANS	AXLE	DSO
129	F60	4A8	NA	63V	1987

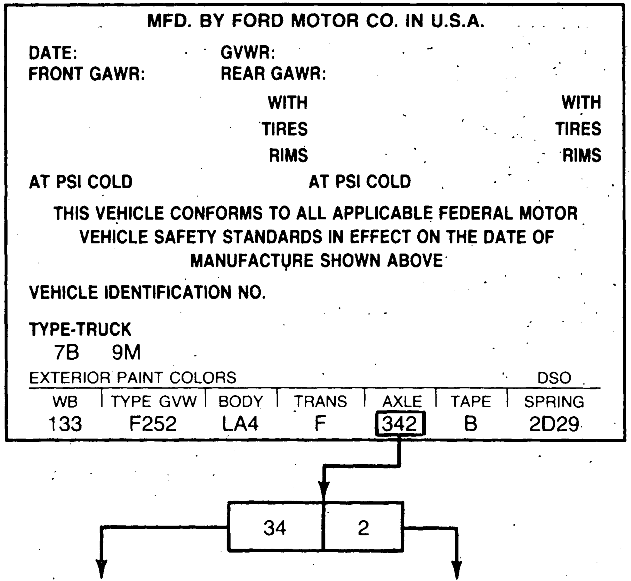
TRANSMISSION CODES

Code	Description	Code	Description
AA	Allison AT-545 Automatic	FT	Fuller RT-6613 13-Speed
AB	Allison MT-643 Automatic	NA	New Process NP435 4-Speed
AC	Allison MT-653 Automatic	NB	New Process NP542-FD 5-Speed
CH	Clark CL-558 5-Speed	NC	New Process NP542-FL 5-Speed
CJ	Clark CL-551 5-Speed	RR	Delete Transmission (DSO Glider)
CK	Clark CL-557 5-Speed	SD	Spicer CM-6052A 5-Speed
CL	Clark CL-450 5-Speed	SE	Spicer CM-6052B 5-Speed
CM	Clark CL-455 5-Speed	SF	Spicer CM-6052C 5-Speed
CR	Fuller FS-6105A 5-Speed	SK	Spicer CM-5552A 5-Speed
CS	Fuller FS-6105B 5-Speed	SL	Spicer CM-5852A 5-Speed
CT	Fuller FS-5106 6-Speed	SM	Spicer CM-5510 5-Speed
CU	Fuller FS-6106 6-Speed	SN	Spicer CM-4054A 5-Speed
FS	Fuller RT-6610 10-Speed	SP	Spicer CM-4054D 5-Speed

CY2664-2D

LIGHT/MEDIUM/HEAVY (Continued)

AXLE CODES
BRONCO, F-150 — F-250 — F-350



MFD. BY FORD MOTOR CO. IN U.S.A.

DATE: GVWR:
FRONT GAWR: REAR GAWR:
WITH WITH
TIRES TIRES
RIMS RIMS
AT PSI COLD AT PSI COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEHICLE IDENTIFICATION NO.

TYPE-TRUCK
7B 9M
EXTERIOR PAINT COLORS DSO

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	SPRING
133	F252	LA4	F	342	B	2D29

REAR AXLE CODES

Code	Description	# Capacity	Ratio
Bronco			
13	Regular	3750	4.11
18	Regular	3750	3.08
16	Regular	3750	3.50
19	Regular	3750	3.55
H3	Limited Slip	3750	4.11
H8	Limited Slip	3750	3.08
H6	Limited Slip	3750	3.50
H9	Limited Slip	3750	3.55
F-150 — F-250 — F-350			
13	Ford	3750	4.11
14	Ford	3750	3.00
16	Ford	3750	3.50
17	Ford	3750	2.47
18	Ford	3750	3.08
19	Ford	3750	3.55
H3	Ford Limited Slip	3750	4.11
H4	Ford Limited Slip	3750	3.00
H6	Ford Limited Slip	3750	3.50
H8	Ford Limited Slip	3750	3.08
H9	Ford Limited Slip	3750	3.55
25	Dana	5300	4.10
29	Dana	5300	3.55
27	Dana	5300	3.73
38	Dana	over 8500	3.08
35	Dana	over 8500	4.10
39	Dana	over 8500	3.55
45	Dana	7400	4.10
49	Dana	7400	3.55
65	Dana	8250	4.10
69	Dana	8250	3.55
B5	Dana Limited Slip	5300	4.10
B9	Dana Limited Slip	5300	3.55
B7	Dana Limited Slip	5300	3.73
C5	Dana Limited Slip	over 8500	4.10
C9	Dana Limited Slip	over 8500	3.55
D5	Dana Limited Slip	7400	4.10
F5	Dana Limited Slip	8250	4.10
F9	Dana Limited Slip	8250	3.55

FRONT AXLE CODES (Not Applicable On E-150 — E-250 — E-350)

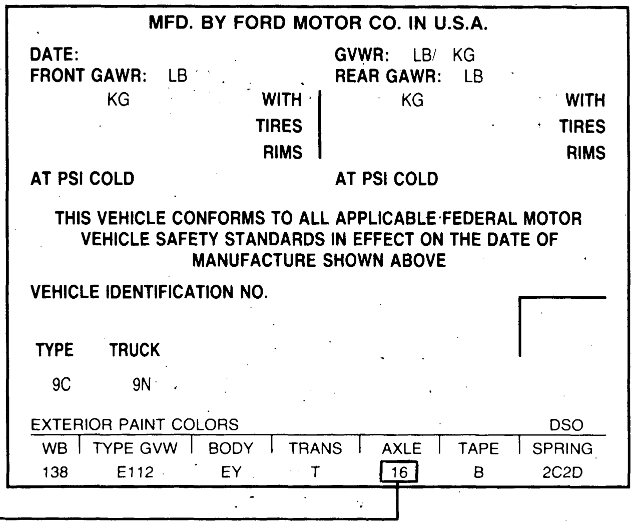
Bronco and F-150 — F-250 — F-350

Code	Description
2	Front Axle Limited Slip

CY2671-2D

LIGHT/MEDIUM/HEAVY (Continued)

AXLE CODES
E-150 — E-250 — E-350



MFD. BY FORD MOTOR CO. IN U.S.A.

DATE:
GVWR: LB/ KG
FRONT GAWR: LB
KG
WITH
TIRES
RIMS
AT PSI COLD
REAR GAWR: LB
KG
WITH
TIRES
RIMS
AT PSI COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEHICLE IDENTIFICATION NO.

TYPE	TRUCK
9C	9N

EXTERIOR PAINT COLORS
DSO

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	SPRING
138	E112	EY	T	16	B	2C2D

E-150 — E-250 — E-350 REGULAR REAR AXLE

Code	Description	# Capacity	Ratio
14	Ford	3750	3.00
16	Ford	3750	3.50
19	Ford	3750	3.55
23	Dana	5300	3.54
24	Dana	5300	3.73
31	Dana	6340	3.07
32	Dana	6340	4.10
33	Dana	6340	3.54
52	Dana	7400	4.10
53	Dana	7400	3.54

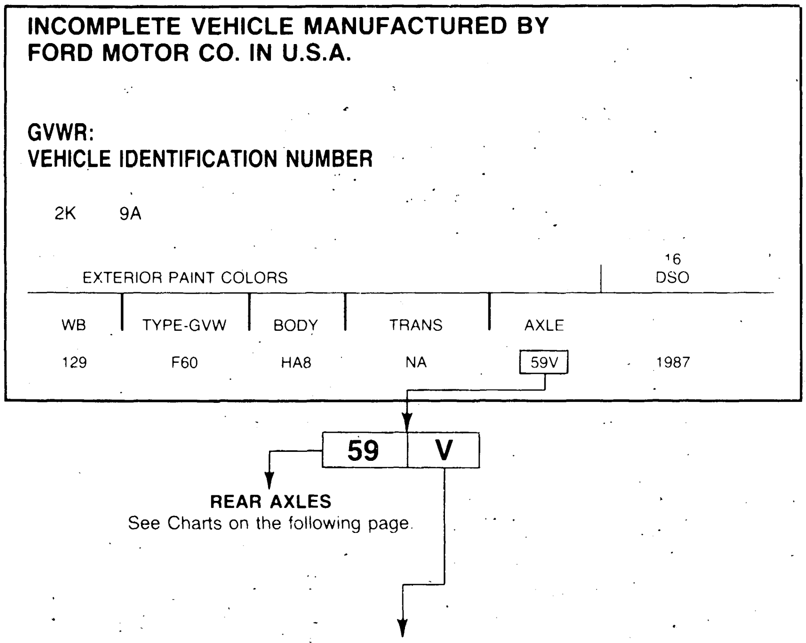
E-150 — E-250 — E-350 LIMITED SLIP REAR AXLE

Code	Description	# Capacity	Ratio
H6	Ford	3750	3.55
H9	Ford	3750	3.08
B3	Dana	5300	3.54
B4	Dana	5300	3.73
C3	Dana	6340	3.54
E2	Dana	7400	4.10

CY2781-2B

LIGHT/MEDIUM/HEAVY (Continued)

AXLE CODES
MEDIUM/HEAVY TRUCK — F-, B- AND C-SERIES



REAR AXLES
See Charts on the following page.

FRONT AXLE CODES

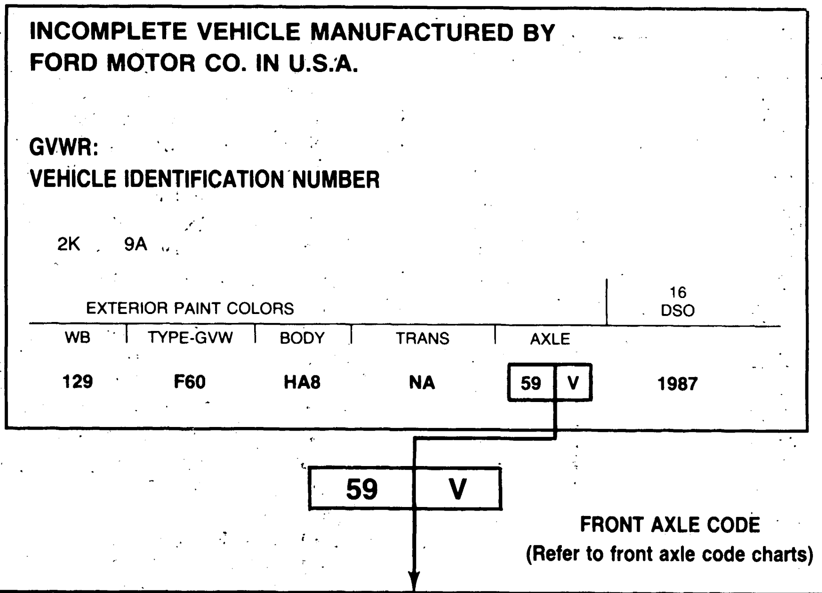
CODE	AXLE	STRG.	CODE	AXLE	STRG.
3	13,100 lb. Steel	Power	M	7,000 lb. Steel	Power
4	7,000 lb. Steel	Manual	N	9,000 lb. Steel	Power
5	9,000 lb. Steel	Manual	P	12,000 lb. Steel	Power
8	6,000 lb. Steel	Manual	S	16,000 lb. Steel	Power
9	8,000 lb. Steel	Manual	T	18,000 lb. Steel	Power
E	12,000 lb. Alum.	Power	U	20,000 lb. Steel	Power
F	12,000 lb. Alum.	Manual	V	6,000 lb. Steel	Power
G	12,000 lb. Steel	Power①	W	8,000 lb. Steel	Power
H	12,000 lb. Steel	Manual	X	12,000 lb. Steel	Manual①
I	12,000 lb. Alum.	Power①	Z	12,000 lb. Alum.	Manual①

① With greasable drag link and tie rods

CY2578-2E

LIGHT/MEDIUM/HEAVY (Continued)

AXLE CODES REAR
MEDIUM/HEAVY TRUCKS — F-, B- AND C-SERIES



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER

2K 9A

EXTERIOR PAINT COLORS					16 DSO
WB	TYPE-GVW	BODY	TRANS	AXLE	
129	F60	HA8	NA	59 V	1987

FRONT AXLE CODE
(Refer to front axle code charts)

SINGLE REAR AXLE CODES

CODE	DESCRIPTION	RATIO	CODE	DESCRIPTION	RATIO	CODE	DESCRIPTION	RATIO
1A	Rockwell R-170	4.11	DP	Eaton 23221	6.17/8.40	TC	RS-15-120	4.56
1T	Rockwell R-170*	4.11	DS	Eaton 17101	4.56	TD	RS-15-120	4.88
2A	Rockwell R-170	4.33	EH	Eaton 17221	5.57/7.60	TE	RS-15-120	5.13
2E	RS-20-145	3.91	EP	Eaton 23221	6.67/9.08	TF	RS-15-120	6.14
2F	RS-20-145	4.10	EQ	Eaton 17121	5.57	TG	RS-15-120	7.17
2G	RS-20-145	4.56	ES	Eaton 17101	4.88	V1	RS-23-160	3.42
2H	RS-20-145	4.88	F4	RS-13-120	4.30	V2	RS-23-160	3.58
2J	RS-20-145	5.29	F5	RS-13-120	4.88	V4	RS-23-160	3.73
2K	RS-20-145	5.86	F6	RS-13-120	6.14	V5	RS-23-160	3.91
2M	RS-20-145	6.43	F7	RS-13-120	7.17	V6	RS-23-160	4.10
2N	RS-20-145	6.83	FH	Eaton 17221	6.14/8.38	V7	RS-23-160	4.30
2P	RS-20-145	7.17	FK	Eaton 22121	5.57	V8	RS-23-160	4.56
2T	Rockwell R-170*	4.33	FQ	Eaton 17121	6.14	V9	RS-23-160	4.89
3A	Rockwell R-170	5.29	FS	Eaton 17101	5.29	VA	Rockwell R-170	4.88
3E	RS-20-230	3.91/5.45	G4	RS-15-210	4.56/6.36	VB	RS-23-160	5.38
3F	RS-20-230	4.10/5.72	G5	RS-15-210	4.88/6.80	VC	RS-23-160	5.63
3G	RS-20-230	4.56/6.36	G6	RS-15-210	5.38/7.50	VD	RS-23-160	6.14
3H	RS-20-230	4.88/6.80	G7	RS-15-210	6.14/8.57	VE	RS-23-160	6.83
3J	RS-20-230	5.38/7.50	G9	RS-15-210	6.83/9.53	VF	RS-23-160	7.17
3K	RS-20-230	6.50/9.07	GG	Eaton 23121	3.70	VH	Eaton 17201	3.70/5.05
3M	RS-20-230	6.83/9.53	GK	Eaton 22121	6.17	VJ	Eaton 17201	4.11/5.60
3N	RS-20-230	7.17/10.0	GP	Eaton 23221	4.11/5.60	VL	Eaton 17201	4.56/6.21
3T	Rockwell R-170*	3.70	HB	Eaton 22221	5.57/7.60	VM	Eaton 17201	4.88/6.65
4A	Rockwell R-170	6.14	HK	Eaton 22121	6.50	VN	Eaton 17201	5.29/7.21
51	RS-17-140	3.91	JB	Eaton 22221	6.17/8.41	W5	RS-17-220	3.91/5.45
52	RS-17-140	4.10	JG	Eaton 23121	3.90	W6	RS-17-220	4.10/5.72
53	RS-17-140	4.56	JH	Eaton 17221	6.57/8.94	W7	RS-17-220	4.56/6.36
54	RS-17-140	4.88	JQ	Eaton 17121	6.57	W8	RS-17-220	4.88/6.80
55	RS-17-140	5.29	KB	Eaton 22221	6.50/8.86	W9	RS-17-220	5.38/7.50
56	RS-17-140	5.86	KK	Eaton 22121	5.29	WA	RS-17-220	6.50/9.07
57	RS-17-140	6.43	MB	Eaton 22221	4.88/6.65	WB	RS-17-220	6.83/9.53
58	RS-17-140	6.83	NB	Eaton 22221	5.29/7.21	WC	RS-17-220	7.17/10.0
59	RS-17-140	7.17	PK	Eaton 22121	4.11	X1	RS-23-240	4.10/5.59
5A	Rockwell R-170	6.83	PP	Eaton 23221	3.70/5.04	X2	RS-23-240	4.30/5.86
7A	Rockwell R-170	5.86	QB	Eaton 22221	4.11/5.61	X3	RS-23-240	4.56/6.22
8A	Rockwell R-170	3.70	QP	Eaton 23221	4.56/6.21	X4	RS-23-240	4.88/6.65
9A	Rockwell R-170	3.90	RK	Eaton 22121	4.62	X5	RS-23-240	5.38/7.33
AG	Eaton 23121	4.11	RP	Eaton 23221	4.88/6.64	X6	RS-23-240	5.57/7.60
AS	Eaton 17101	3.70	SA	Rockwell R-170	4.63	X7	RS-23-240	6.14/8.38
BG	Eaton 23121	4.33	SB	Eaton 22221	4.62/6.31	X8	RS-23-240	6.50/8.85
BS	Eaton 17101	4.11	SK	Eaton 22121	4.88	X9	RS-23-240	7.17/9.76
CP	Eaton 23221	5.43/7.39						

*Aluminum Carrier Housing

CY2579-2E

LIGHT/MEDIUM/HEAVY (Continued)

AXLE CODES — REAR (Cont'd.)
MEDIUM/HEAVY TRUCKS — F-, B-, AND C-SERIES
TANDEM REAR AXLE CODES

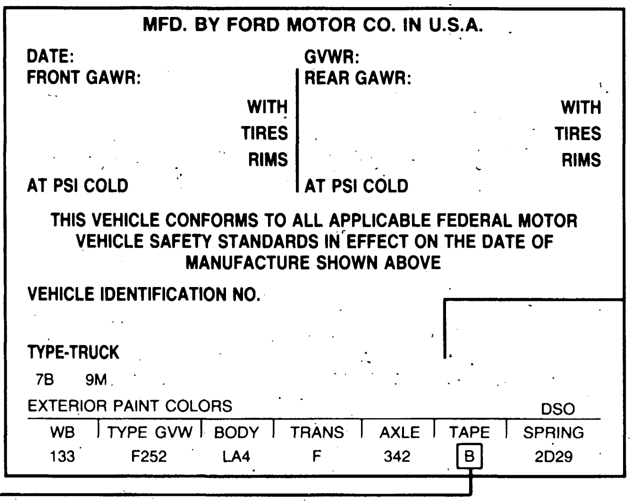
Code	Description	Ratio	Code	Description	Ratio
1C	Eaton DS-341	4.11	B6	Rockwell SQ-100	4.33
2C	Eaton DS-341	4.33	B8	Rockwell SQ-100	4.63
3C	Eaton DS-341	3.70	B9	Rockwell SQ-100	4.88
4C	Eaton DS-341	3.90	BA	Rockwell SQ-100	5.29
5C	Eaton DS-341	4.56	BB	Rockwell SQ-100	5.86
6C	Eaton DS-341	4.88	BC	Rockwell SQ-100	6.14
7C	Eaton DS-341	5.29	BD	Rockwell SQ-100	6.83
♦81	Eaton DS-402	3.70	BE	Rockwell SQ-100	7.17
♦82	Eaton DS-402	3.90	BU	Eaton DT-341	4.11/5.61
♦83	Eaton DS-402	4.11	DU	Eaton DT-341	4.56/6.21
♦86	Eaton DS-402	4.33	EU	Eaton DT-341	4.88/6.65
♦87	Eaton DS-402	4.56	FU	Eaton DT-341	5.29/7.21
♦89	Eaton DS-402	4.88	FX	Eaton DT-401P	4.56/6.21
♦8B	Eaton DS-402	5.29	GU	Eaton DT-341	5.57/7.60
8C	Eaton DS-341	5.57	HU	Eaton DT-341	6.14/8.38
♦8D	Eaton DS-402	5.57	JU	Eaton DT-341	6.50/8.87
♦8E	Eaton DS-402	5.83	KU	Eaton DT-341	7.17/9.77
8F	Rockwell SQ-100P*	3.73	RC	Eaton DS-341	6.50
♦8G	Eaton DS-402	6.14	SC	Eaton DS-341	7.17
♦8H	Eaton DS-402	6.50	WL	Rockwell SL-100	3.90
8J	Rockwell SQ-100P*	4.10	WN	Rockwell SL-100	4.33
♦8K	Eaton DS-402	7.17	WQ	Rockwell SL-100	4.63
91	Rockwell SL-100	3.73	WR	Rockwell SL-100	4.88
92	Rockwell SL-100	4.10	WS	Rockwell SL-100	5.29
93	Rockwell SL-100	5.86	WV	Rockwell SL-100	6.83
94	Rockwell SL-100	6.14	YB	Rockwell SQ-100P	6.14
95	Rockwell SL-100	7.17	YM	Rockwell SQ-100P	4.63
♦96	Eaton DP-402	5.05	YN	Rockwell SQ-100P	5.86
♦97	Eaton DP-402	5.61	YQ	Rockwell SQ-100P	3.73
9C	Eaton DS-341	6.14	YS	Rockwell SQ-100P	4.33
AU	Eaton DT-341	3.70/5.05	YT	Rockwell SQ-100P	4.88
B2	Rockwell SQ-100	3.55	YU	Rockwell SQ-100P	3.90
B3	Rockwell SQ-100	3.73	YV	Rockwell SQ-100P	4.10
B4	Rockwell SQ-100	3.90	YW	Rockwell SQ-100P	5.29
B5	Rockwell SQ-100	4.10			

*Aluminum Carrier Housing.

CY3102-2A

LIGHT/MEDIUM/HEAVY (Continued)

EXTERNAL BODY TAPE STRIPE CODES BRONCO, E-150 — E-250 — E-350, F-150 — F-250 — F-350



MFD. BY FORD MOTOR CO. IN U.S.A.

DATE: GVWR:

FRONT GAWR: REAR GAWR:

WITH TIRES RIMS AT PSI COLD

WITH TIRES RIMS AT PSI COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEHICLE IDENTIFICATION NO.

TYPE-TRUCK

7B 9M

EXTERIOR PAINT COLORS DSO

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	SPRING
133	F252	LA4	F	342	B	2D29

BRONCO EXTERNAL BODY TAPE STRIPE CODES

Code	Tape Stripe
1	Light Blue/Bright Blue
2	Medium Tan/Dark Tan
3	Medium Charcoal/Red Orange
U	Light Desert Tan — Paint Stripe with Medium Tan/Dark Tan — Tape Break Stripe

F-150 — F-350 EXTERNAL BODY TAPE STRIPE CODES XL SRW STYLESIDE SOLID PAINT (PAINT STRIPE) LESS CHAMFER STRIPES

Code	Tape Stripe
1	Red Orange
2	Regatta Blue
3	Copper
4	Light Desert Tan
5	Medium Gray

F-150 — F-350 ALL TUTONES (TAPE) REGULAR AND VICTORIA TUTONES (TAPE)

Code	Tape Stripe
1	Light Blue/Bright Regatta Blue
2	Tan/Desert Tan
3	Medium Charcoal/Red Orange

ECONOLINE — TAPE STRIPES

Code	Tape Stripe
1	Bright Coral/Red Orange
2	Medium Light Blue/Bright Blue
3	Bright Mandarin/Orange
4	Medium Light Desert Tan/Desert Tan

TUTONE TAPE LESS EXPLORER TUTONE TAPE

Code	Tape Stripe
1	Light Blue/Bright Regatta Blue
2	Medium Tan/Light Desert Tan
3	Medium Charcoal/Red Orange

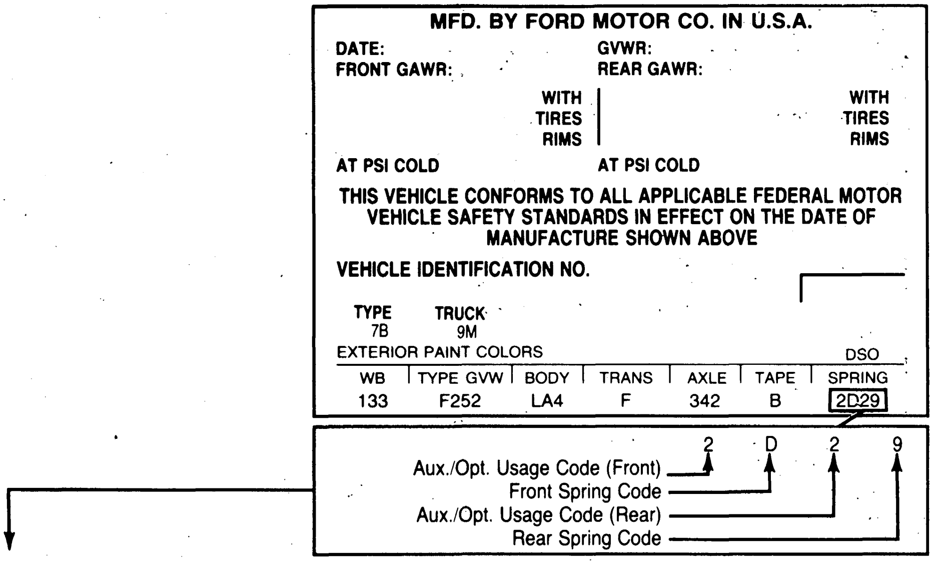
EXPLORER TAPE TUTONES

Code	Tape Stripe
A	Silver Metallic
B	Light Regatta Blue
C	White
D	Light Desert Tan

CY2672-2D

LIGHT/MEDIUM/HEAVY (Continued)

SUSPENSION — SPRING IDENTIFICATION CODES
BRONCO, F-150 — F-250 — F-350



MFD. BY FORD MOTOR CO. IN U.S.A.

DATE: GVWR:
FRONT GAWR: REAR GAWR:
WITH TIRES RIMS WITH TIRES RIMS
AT PSI COLD AT PSI COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEHICLE IDENTIFICATION NO.

TYPE 7B
TRUCK 9M
EXTERIOR PAINT COLORS DSO

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	SPRING
133	F252	LA4	F	342	B	2D29

BRONCO SPRING IDENTIFICATION CODES

Aux./Opt. Usage Code (Front) — Not Applicable Aux./Opt. Usage Code (Rear) — Not Applicable

FRONT SPRING CODES — BRONCO

Code	Part Number
B	E0TA-5310-BC
C	E0TA-5310-CC
G	E0TA-5310-GC
U	E0TA-5310-UC
V	E0TA-5310-VB

REAR SPRING CODES — BRONCO

Code	Part Number
Z	E3TA-5560-ANA

F-150 — F-250 — F-350
AUX./OPT. FRONT SPRING USAGE CODE

Code	Description
3	Maximum Front GAWR Package
4	Heavy Duty Front Suspension Package

F-150 — F-250 — F-350
FRONT SPRING CODES

Code	Part Number
A	E0TA-5310-AC
B	E0TA-5310-BC
C	E0TA-5310-CC
D	E0TA-5310-DC
E	E0TA-5310-EC
F	E0TA-5310-FC
G	E0TA-5310-GC
H	E3TA-5310-XA
J	E3TA-5310-YA
K	E3TA-5310-ZA
M	E3TA-5310-AAA
N	E5TS-5310-BA
R	E5TA-5310-RA
S	E5TA-5310-SA
T	E5TA-5310-TA
U	E0TA-5310-UC
V	E0TA-5310-VB
5	E0TA-5310-AAB
6	E0TA-5310-ABB
7	E0TA-5310-ACB
8	E5TA-5310-NA
9	E3TA-5310-ABA

F-150 — F-250 — F-350
AUX./OPT. REAR SPRING USAGE CODE

Code	Description
3	Heavy Duty Rear Suspension Package
—	Auxiliary Rear Springs
4	400# — F-150
7	710# — F-250 — F-350
9	900# — F-350

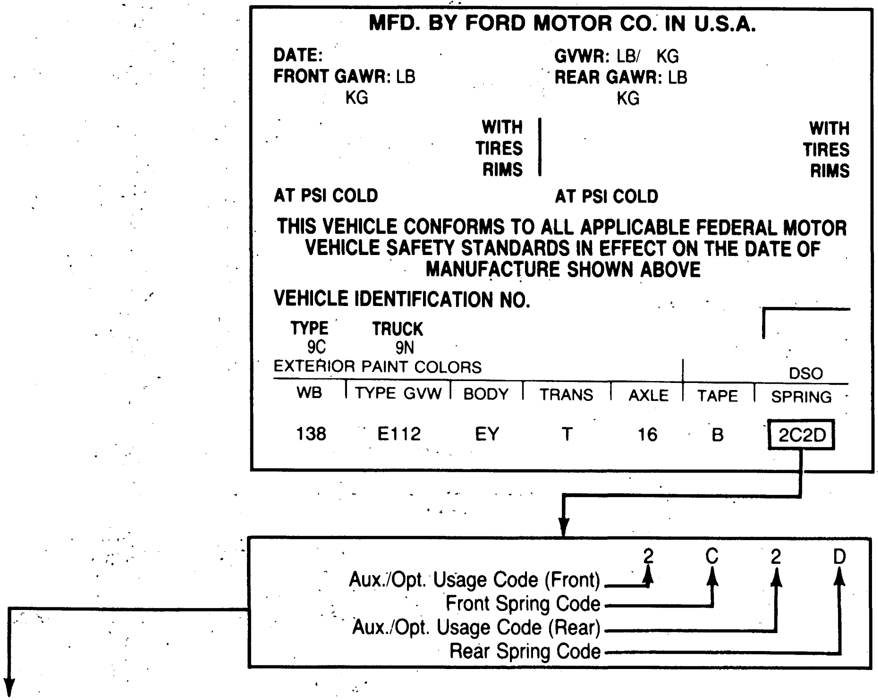
F-150 — F-250 — F-350
REAR SPRING CODE

Code	Part Number
A	E4TA-5560-SA
D	E6TA-5560-NA
H	E6TA-5560-LA
K	E3TA-5560-AJA
L	E3TA-5560-KA
V	E6TA-5560-RA
5	E5TA-5560-YA
6	E4TA-5560-EA
9	E4TA-5560-HA

CY2673-2C

LIGHT/MEDIUM/HEAVY (Continued)

SUSPENSION-SPRING IDENTIFICATION CODES
E-150 — E-250 — E-350



MFD. BY FORD MOTOR CO. IN U.S.A.

DATE: **GVWR:** LB/ KG
FRONT GAWR: LB KG **REAR GAWR:** LB KG

WITH TIRES RIMS **WITH TIRES RIMS**

AT PSI COLD **AT PSI COLD**

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEHICLE IDENTIFICATION NO.

TYPE	**TRUCK**
9C	9N

EXTERIOR PAINT COLORS DSO

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	SPRING
138	E112	EY	T	16	B	2C2D

E-150 — E-250 — E350
AUX./OPT. FRONT SPRING USAGE CODE

Code	Description
2	Heavy Duty Front Springs
4	Front Spring 3,850/4,200 # GAWR Rating

E-150 — E-250 — E350
FRONT SPRING CODES

Code	Part Number
A	D5UA-5310-BA
B	D5UA-5310-CA
C	D5UA-5310-DA
D	D5UA-5310-EA
E	D5UA-5310-FA
F	D5UA-5310-HB
G	D5UA-5310-JB
H	D5UA-5310-KA
J	D5UA-5310-LB
K	D5UA-5310-MA
L	D5UA-5310-RA
M	D5UA-5310-SA
N	D5UA-5310-UA
O	D5UA-5310-VA
P	D5UA-5310-ALB
R	D5UA-5310-AMB
S	D5UA-5310-ARB
T	D5UA-5310-AUB
V	D7UA-5310-AHA
W	D7UA-5310-AJA
Y	D8TA-5310-HA

E-150 — E-250 — E-350
AUX./OPT. REAR SPRING USAGE CODES

Code	Description
2	Heavy Duty Rear Springs
4	Handling Package

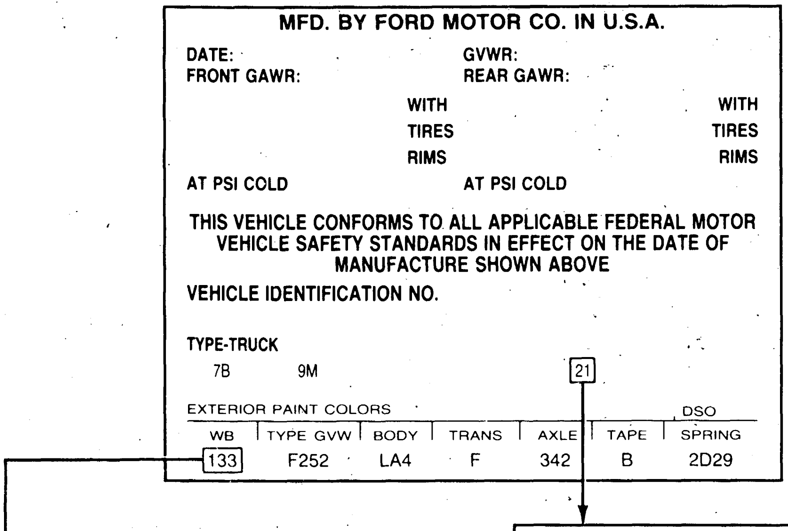
E-150 — E-250 — E-350
REAR SPRING CODES

Code	Part Number
A	D9TA-5560-ZA
C	E1TA-5560-ACA
E	E1TA-5560-AEA
F	E1TA-5560-ALA
J	D9TA-5560-LA
K	D9TA-5560-HA
L	E2TA-5560-ARA
N	E1TA-5560-AHA
P	D9TA-5560-AYA
Q	E0TA-5560-BVA
T	D9TA-5560-KA
Y	D9TA-5560-AVA
Z	D9TA-5560-JA

CY2782-2C

LIGHT/MEDIUM/HEAVY (Continued)

DISTRICT SALES OFFICE (DSO) AND WHEELBASE (WB) CODES BRONCO, E-150 — E-250 — E-350, F-150 — F-250 — F-350



MFD. BY FORD MOTOR CO. IN U.S.A.

DATE: GVWR:
FRONT GAWR: REAR GAWR:
WITH WITH
TIRES TIRES
RIMS RIMS
AT PSI COLD AT PSI COLD

THIS VEHICLE CONFORMS TO ALL APPLICABLE FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE

VEHICLE IDENTIFICATION NO.

TYPE-TRUCK
7B 9M 21

EXTERIOR PAINT COLORS DSO

WB	TYPE GVW	BODY	TRANS	AXLE	TAPE	SPRING
133	F252	LA4	F	342	B	2D29

DSO — FSO — PTO (DOMESTIC, FOREIGN AND SPECIAL ORDER)

The D.S.O. space will show a two-digit code number of the district which ordered the unit (see chart below). This code will appear on all units — domestic or export. If unit is built on a D.S.O., F.S.O., P.T.O. (special orders), the complete order number is under the D.S.O. spacer **after** the district code number.

Wheelbase (inches)

Bronco
105

F-150 — F-250 — F-350	
117	
133	155
137	161
139	168

E-150 — E-250 — E-350 (Econoline and Club Wagon)
124
138
158
176

Code	District
11	Boston
12	Buffalo
13	New York
14	Pittsburgh
16	Philadelphia
17	Washington
21	Atlanta
22	Charlotte
23	Memphis
24	Jacksonville
26	New Orleans
28	Louisville
41	Chicago
42	Cleveland
43	Milwaukee
46	Indianapolis
47	Cincinnati
48	Detroit

Code	District
52	Dallas
53	Kansas City
54	Omaha
55	St. Louis
57	Houston
58	Twin Cities
71	Los Angeles
72	San Jose
74	Seattle
75	Phoenix
76	Denver
83	Government
84	Home Office Reserve
85	American Red Cross
86	Recreation Vehicles
87	Body Company
89	Transportation Services
90's	Export
00	Special

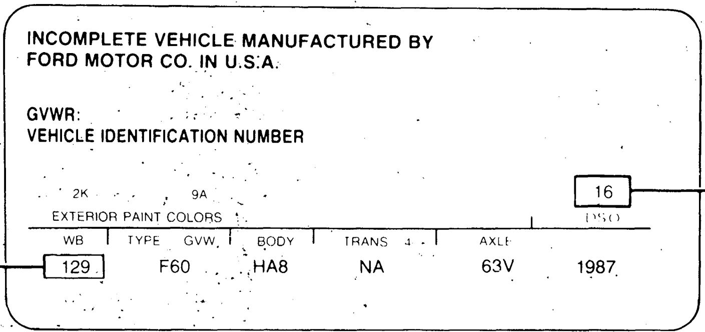
Ford of Canada

Mercury Regions	Ford Regions
A1 Central	B1 Central
A2 Eastern	B2 Eastern
A3 Atlantic	B3 Atlantic
A4 Midwestern	B4 Midwestern
A6 Western	B6 Western
A7 Pacific	B7 Pacific
A8 Great Lakes	B8 Great Lakes
11 Export	11 Export

CY2392-2F

LIGHT/MEDIUM/HEAVY (Continued)

DISTRICT SALES OFFICE (DSO) AND WHEELBASE (WB) CODES MEDIUM HEAVY TRUCK — F, B AND C-SERIES



INCOMPLETE VEHICLE MANUFACTURED BY
FORD MOTOR CO. IN U.S.A.

GVWR:
VEHICLE IDENTIFICATION NUMBER

Wheelbase	(inches)
F600-800 F7000-8000	129 142 141 154 153 178 171 190 177 196 189 214 207 238 225 237
FT-800- 8000-9000	154 178 190 196 214 238
B600	151 193 217 237
B700-B7000	237 255 275
C800 C8000	111 135 153 175
CT-8000	135 153 161

DSO — FSO — PTO (DOMESTIC, FOREIGN AND SPECIAL ORDER)

The D.S.O. space will show a two-digit code number of the district which ordered the unit (see chart below). This code will appear on all units — domestic or export. If unit is built on a D.S.O., F.S.O., P.T.O. (special orders), the complete order number is under the D.S.O. space **after** the district code.

Code	District
11	Boston
12	Buffalo
13	New York
14	Pittsburgh
16	Philadelphia
17	Washington
21	Atlanta
22	Charlotte
23	Memphis
24	Jacksonville
26	New Orleans
28	Louisville
41	Chicago
42	Cleveland
43	Milwaukee
46	Indianapolis
47	Cincinnati
48	Detroit

Code	District
52	Dallas
53	Kansas City
54	Omaha
55	St. Louis
57	Houston
58	Twin Cities
71	Los Angeles
72	San Jose
74	Seattle
75	Phoenix
76	Denver
83	Government
84	Home Office Reserve
85	American Red Cross
86	Recreation Vehicles
87	Body Company
89	Transportation Services
90's	Export
00	Special

Ford of Canada

Mercury Regions	Ford Regions
A1 Central	B1 Central
A2 Eastern	B2 Eastern
A3 Atlantic	B3 Atlantic
A4 Midwestern	B4 Midwestern
A6 Western	B6 Western
A7 Pacific	B7 Pacific
A8 Great Lakes	B8 Great Lakes
I2 Export	I1 Export

CY2410-2F

SECTION 50-02 Pre-Delivery

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VEHICLE APPLICATION 50-02-1

VEHICLE APPLICATION

All Truck Models.

LIGHT TRUCKS

Check/Inspect the Vehicle as Shown: Perform Specified Adjustments When Required.

UNDERHOOD OPERATIONS

☐ Check emission control system for loose, missing or damaged components, also check for and correct loose or disconnected electrical and vacuum connections.
☐ Check and top up all fluids to specified levels — engine oil, brake master cylinder, windshield and rear window washer reservoirs, automatic transmission, power steering (hot), engine cooling system.
☐ Check fuel line for leaks, damage and proper positioning.

BODY OPERATIONS

☐ Install loose items — such as wheel covers, cigar lighter, antenna, truck exterior mirrors, anti-theft wheel lug nuts and other optional equipment.
☐ Check operation of door latches.
☐ Check seat belts for proper installation.
☐ Check operation of seatback latches.

CHASSIS OPERATIONS

☐ Check and top up fluid levels in manual transmission.
☐ Remove shipping brackets — Bronco II only.
☐ Remove spring insulators — F250/350 4 x 4 only.
☐ Adjust tire pressures to specification.
☐ Check steering gear and flex coupling steering linkage, and suspension for damage or loose fasteners.
☐ Torque truck dual wheel nuts to specification.
☐ Check fluid lines for damage, leaks and proper positioning.

ROAD TEST OPERATIONS

☐ Check steering column lock.
☐ Check starting of engine in park and neutral.

ROAD TEST OPERATIONS (Cont'd)

☐ Check operation of horn, windshield wiper and washer, lights, signals, hazard flasher and instruments.
☐ Check throttle operation and idle return.
☐ Check choke linkage for freedom of movement.
☐ Check operation of heater, air conditioner, defroster, ventilation system, radio, seat belt warning system and all other optional equipment.
☐ Check brakes (including parking brake and warning lamp).
☐ Check steering control.
☐ Check driveability during road test (including fast idle return to curb idle during warm-up). If an overt idle speed problem exists, check and adjust engine idle speeds (including TV linkage when necessary) or perform warranty repair to correct to specifications shown on the vehicle emission control information decal.
☐ Check automatic transmission or manual transmission and clutch performance.
☐ Check for squeaks and rattles.
☐ Check for drive belt noise; tighten loose belts.
☐ Check exhaust system for leaks.

APPEARANCE OPERATIONS

☐ Wash vehicle and perform detailed clean up of interior and exterior.
☐ Touch up minor paint blemishes (brush, aerosol can and/or spot polish).
☐ Check for necessary owner information material in the glove compartment.
☐ Remove protective covers (seat and carpet).

CY3116-2A

PRE-DELIVERY SERVICE—LIGHT TRUCKS

Underhood Operations

CHECK EMISSION CONTROL SYSTEM FOR LOOSE, MISSING OR DAMAGED COMPONENTS. ALSO CHECK FOR AND CORRECT LOOSE OR DISCONNECTED ELECTRICAL AND VACUUM CONNECTIONS.

Visually check vacuum and electrical connections to insure system integrity.

CHECK AND TOP-UP ALL FLUID LEVELS TO SPECIFIED LEVEL—ENGINE OIL, BRAKE MASTER CYLINDER, HYDRAULIC CLUTCH MASTER CYLINDER, WINDSHIELD AND REAR WINDOW WASHER RESERVOIRS, AUTOMATIC TRANSMISSION, POWER STEERING (HOT) AND COOLING SYSTEM.

CHECK ENGINE OIL LEVEL

On all engines, the oil level should be above the ADD range on the dipstick. Oil level check should be made with the vehicle on level ground. Add oil as required.

Check Engine Oil Level—6.9L Diesel Engine

To check the engine oil level accurately, the following procedure is recommended.

1. Have engine at normal operating temperature.
2. Park vehicle on level surface.
3. Allow at least fifteen (15) minutes after engine shutdown, to assure that oil contained in the upper parts of the engine has returned to the oil pan.
4. Pull dipstick, wipe clean and reinsert fully with dipstick loop directed inboard.
5. Withdraw and read dipstick.
6. Maintain the oil level between the "FULL" and "ADD" marks on the dipstick by adding oil as required. (The distance between the "ADD" and "FULL" marks on the dipstick represents two (2) quarts.)

CAUTION: DO NOT OVERFILL. If the oil level exceeds the "FULL" mark, oil consumption may result.

Check Brake Master Cylinder Fluid Level

Inspect the translucent master cylinder reservoir. The fluid should be at the maximum level line of the reservoir. If fluid is required, add only Heavy Duty Brake Fluid, C6AZ-19542-A (ESA-M6C25-A) or equivalent D.O.T. 3 brake fluid.

NOTE: Fluid level will decrease as the brake linings wear. This is a normal condition.

CHECK WINDSHIELD AND REAR WINDOW WASHER RESERVOIR LEVEL

Add fluid as necessary.

Check Hydraulic Clutch Master Cylinder Fluid Level—Vehicles So Equipped

Remove the master cylinder diaphragm and check fluid level. Fluid level should be at least to the "step" in the master cylinder. Use only the specified fluid (Section 50-03, Lubricant and Lubrication Charts).

CHECK AUTOMATIC TRANSMISSION FLUID LEVEL

CAUTION: Vehicle should not be driven if fluid level is below the "DO NOT DRIVE" hole.

Transmission—Operating Temperature

The automatic transmission should be checked at an operating temperature of 66° to 77°C (150° to 170°F) (dipstick is hot to the touch). The operating temperature may be obtained by driving 24-32 km (15 to 20 miles) of city-type driving with the outside temperature above 10°C (50°F).

CAUTION: If vehicle has been operated for an extended period at high speed, or in city traffic in hot weather, or vehicle is being used to pull a trailer, to obtain an accurate reading, the fluid has to cool, usually about 30 minutes after engine has been turned off.

Transmission—Room Temperature

If the transmission is not at an operating temperature of 66° to 77°C (150° to 170°F) and it becomes necessary to check the fluid level (such as pre-delivery), the fluid may be checked at room temperature, 21° to 35°C (70° to 95°F) (dipstick cool to touch).

Dipstick Reading

The fluid level on the dipstick should be within the cross hatched area at operating temperature. The fluid level on the dipstick should read between the holes at room temperature.

Check the fluid as follows:

1. With the transmission in PARK, engine at idle rpm, foot brakes applied, and vehicle on level surface, move the transmission selector lever through each range, allowing time in each range to engage transmission. Return to PARK, applying parking brake fully, and block the wheels. Do not turn off the engine during the fluid level check.
2. Clean all dirt from the transmission fluid dipstick cap before removing the dipstick from the filler tube.
3. Pull the dipstick out of the tube, wipe it clean, and push it all the way back into the tube. Be sure it is fully seated.

PRE-DELIVERY SERVICE—LIGHT TRUCKS (Continued)

4. Pull the dipstick out of the filler tube again, and check the fluid level.

IMPORTANT: The fluid level indication on the dipstick will be different at operating temperature and room temperature. For the correct fluid level reading on the dipstick, follow the appropriate instructions stated previously.

Before adding fluid, be sure that the correct type will be used. If in doubt, check the Vehicle Certification Label affixed to the left front door lock face panel or door pillar for the Transmission Code. Also, the fluid is stamped on the dipstick.

For C6 automatic transmission (Code G), and the Automatic Overdrive Transmission (Code T), use DEXRON® II or equivalent.

CAUTION: Use of a fluid other than specified could result in transmission malfunction and/or failure.

If necessary, add enough fluid through the filler tube to raise the level to the correct position. Do not overfill the transmission, because it will result in foaming, loss of fluid through the vent, and possible transmission malfunction. If overfill occurs, excess must be removed.

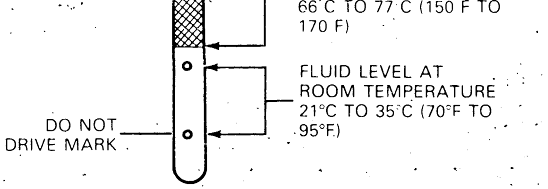
5. Install the dipstick, making sure it is fully seated in the tube.

If the transmission fluid level is correctly established at 21° to 35°C (70° to 95°F), it will appear in the cross hatch area on the dipstick when the transmission reaches an operating temperature of 66° to 77°C (150° to 170°F). Do not overfill or underfill.

Overfill can cause the fluid to foam and spill out through the transmission vent resulting in a transmission malfunction.

Underfill can result in transmission loss of engagement or slipping. This condition is most evident in cold weather or when the vehicle is parked or being driven on a hill.

If the transmission fluid level is checked when the fluid is at room temperature, the dipstick could indicate that fluid should be added if the dipstick is misread. If fluid is added at this time, an overfill condition could result when the fluid reaches operating temperatures of 66° to 77°C (150° to 170°F) (dipstick hot to touch).


FLUID LEVEL AT OPERATING TEMPERATURE 66°C TO 77°C (150°F TO 170°F)
FLUID LEVEL AT ROOM TEMPERATURE 21°C TO 35°C (70°F TO 95°F)
DO NOT DRIVE MARK

D7423-1A

Check Power Steering Pump Reservoir Fluid Level (Hot)

With engine off, remove cap from power steering reservoir and wipe dipstick clean. Reinstall cap and remove again to check fluid level on dipstick.

With power steering fluid at 80°-110°C (176°-230°F), normal operating temperatures, check Full Hot side of dipstick. Fluid level should be between lines in the Full Hot Range. Adjust fluid level if not within range. Use Automatic Transmission Fluid, Ford Part Number XT-1-QF, Specification Number ESW-M2C33-F, or equivalent.

Check Engine Cooling System Fluid Level

[Bronco—E-150—E-350, F-150—F-350]

With the engine cold (at ambient temperature), check crossflow radiators (horizontal tubes) to see that coolant level is 0 to 1.5 inches below the pressure cap seat in the radiator filler neck. On E-150, E-250, E-350 and F-Series vehicles equipped with 6.9L diesel engines downflow radiators, (vertical tubes), check to see that coolant level is maintained at .75 to 1.5 inches below the pressure cap seat in the radiator filler neck.

On cooling systems equipped with a coolant recovery system, it is not necessary to have coolant in the overflow reservoir.

Check Engine Cooling System Fluid Level

[AEROSTAR]

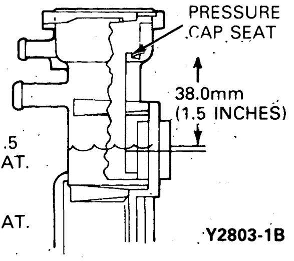
With the engine cold (at ambient temperature), check radiator to see that coolant level is 0-38mm (0-1.5 inch) below the **pressure cap seat** in the radiator filler neck.

CAUTION: This vehicle has an aluminum radiator and requires a special unique corrosion inhibited coolant formulation to avoid radiator damage. Use only a permanent type coolant that meets Ford Specification ESE-M97B44-A, such as Ford Cooling System Fluid (E2FZ-19549-A [in Canada, Motorcraft CXC-8-B]) or equivalent. DO NOT USE alcohol or methanol antifreeze, or mix them with the specified coolant. Use of the wrong coolant may cause radiator and/or engine damage. A mixture of less than 30% coolant concentrate may result in engine corrosion and over-heating.

PRE-DELIVERY SERVICE—LIGHT TRUCKS (Continued)

Add coolant mixture to the overflow reservoir if necessary.

WARNING: NEVER REMOVE THE RADIATOR CAP UNDER ANY CONDITION WHILE THE ENGINE IS OPERATING. FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN DAMAGE TO THE COOLING SYSTEM OR ENGINE AND/OR PERSONAL INJURY. TO AVOID HAVING SCALDING HOT COOLANT OR STEAM BLOW OUT OF THE RADIATOR, DO NOT REMOVE THE CAP FROM A HOT RADIATOR. IF NECESSARY TO REMOVE THE RADIATOR CAP BEFORE THE ENGINE HAS COOLED COMPLETELY, WRAP A THICK CLOTH AROUND THE RADIATOR CAP, AND TURN IT SLOWLY TO THE FIRST STOP. STEP BACK WHILE THE PRESSURE IS RELEASED FROM THE COOLING SYSTEM. WHEN YOU ARE SURE ALL THE PRESSURE HAS BEEN RELEASED, PRESS DOWN ON THE CAP (STILL WITH A CLOTH), TURN AND REMOVE IT.



MAINTAIN FLUID LEVEL BETWEEN PRESSURE CAP SEAT AND 38mm (1.5 INCHES) BELOW PRESSURE CAP SEAT. ADD COOLANT ONLY WHEN FLUID LEVEL IS MORE THAN 38mm (1.5 INCHES) BELOW PRESSURE CAP SEAT.

CHECK ENGINE COOLING SYSTEM FLUID LEVEL GASOLINE ENGINES

[RANGER/BRONCO II]

With the engine cold (at ambient temperature), check crossflow radiators (horizontal tubes) to see that coolant level is 38mm (1.5 inch) below the pressure cap seat in the radiator filler neck.

On cooling systems equipped with a coolant recovery system, it is not necessary to have coolant in the overflow reservoir.

WARNING: NEVER REMOVE THE RADIATOR CAP UNDER ANY CONDITION WHILE THE ENGINE IS OPERATING. FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN DAMAGE TO THE COOLING SYSTEM OR ENGINE AND/OR PERSONAL INJURY. TO AVOID HAVING SCALDING HOT COOLANT OR STEAM BLOW OUT OF THE RADIATOR, DO NOT REMOVE THE CAP FROM A HOT RADIATOR. IF NECESSARY TO REMOVE THE RADIATOR CAP BEFORE THE ENGINE HAS COOLED COMPLETELY, WRAP A THICK CLOTH AROUND THE RADIATOR CAP, AND TURN IT SLOWLY TO THE FIRST STOP. STEP BACK WHILE THE PRESSURE IS RELEASED FROM THE COOLING SYSTEM. WHEN YOU ARE SURE ALL THE PRESSURE HAS BEEN RELEASED, PRESS DOWN ON THE CAP (STILL WITH A CLOTH), TURN AND REMOVE IT.

DIESEL ENGINES

[RANGER/BRONCO II]

With the engine cold, (at ambient temperature) check the fluid level in the coolant outlet connector (which is mounted on the engine) and also in the expansion reservoir. The fluid level in the connector should be 25mm (1.0 inch) below the filler neck seat. Add coolant only when the fluid level is more than 25mm (1.0 inch) below the filler neck seat. On a full system, it is normal for the coolant expansion reservoir to be filled to the cold fill line or slightly above when the engine is cold.

Whenever coolant level checks are made, check the condition of the coolant outlet connector cap rubber seal. Make sure it is clean and free of any dirt particles. Rinse with water if necessary. When replacing the cap on the coolant outlet connector; also, make sure the coolant outlet connector filler neck seat is clean. Check that the overflow hose is not kinked and is connected to the coolant outlet connector filler neck and coolant reservoir.

WARNING: FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN SERIOUS PERSONAL INJURY FROM HOT COOLANT OR STEAM BLOW OUT AND/OR DAMAGE TO THE COOLANT SYSTEM OR ENGINE. NEVER REMOVE THE OUTLET CONNECTOR CAP UNDER ANY CIRCUMSTANCES WHEN THE ENGINE IS OPERATING. SWITCH OFF THE ENGINE AND WAIT UNTIL IT HAS COOLED. EVEN THEN USE EXTREME CARE WHEN REMOVING THE CAP FROM THE COOLANT OUTLET CONNECTOR. WRAP A THICK CLOTH AROUND THE CAP AND TURN IT SLOWLY TO THE FIRST STOP. STEP BACK WHILE THE PRESSURE IS RELEASED FROM THE COOLING SYSTEM. WHEN YOU ARE SURE ALL THE PRESSURE HAS BEEN RELEASED, PRESS DOWN ON THE CAP, STILL WITH A CLOTH, AND TURN AND REMOVE IT. STAND CLEAR OF THE COOLANT FILL OPENING. HOT COOLANT MAY SPLASH OUT.

CHECK FUEL LINES FOR LEAKS, DAMAGE AND PROPER POSITIONING

Check fuel lines for leaks, loose connections, damage, kinks or interference with adjacent moving or frictional components.

BODY OPERATIONS

Install Loose Items—Such as Wheel Covers (Trim Ring/Hub Ornaments), Cigar Lighter, Antenna, Luggage Rack, Truck Exterior Mirrors, Anti-theft Wheel Lug Nuts and Other Optional Equipment

Wheel Covers

Center the tire valve stem in the wheel cover hole and position the cover on the wheel with the valve stem side of cover tight against wheel. Use rubber mallet to tap cover in place beginning on outer perimeter opposite valve stem.

PRE-DELIVERY SERVICE—LIGHT TRUCKS (Continued)

NOTE: Never apply mallet to any part of the wheel cover other than the outer rim as the cover may be dented or distorted. Be sure cover is fully seated against wheel all around perimeter of cover.

Trim Ring/Hub Ornament—(Ranger/Bronco II)

Center the tire valve stem in the trim ring hole and position the trim ring on the wheel with the valve stem side of cover tight against wheel. Beginning on the outer perimeter opposite the valve stem, use a rubber mallet to tap the trim ring in place.

NOTE: Never apply mallet to any part of the trim ring other than the outer rim as the trim ring may be dented or distorted. Be sure trim ring is fully seated against wheel all around perimeter of trim ring.

Bright Hub Cap—(Aerostar)

Install base hub cap attachment bracket to wheel using screws provided. Be sure the screws are tightened to 2-2.5 N·m (18-22 in-lb). Snap bright hub cap over the retaining bracket insuring that hub cap engages all retainer tabs.

Other Optional Equipment

Check type and location specified, and install, using installation instructions and template supplied.

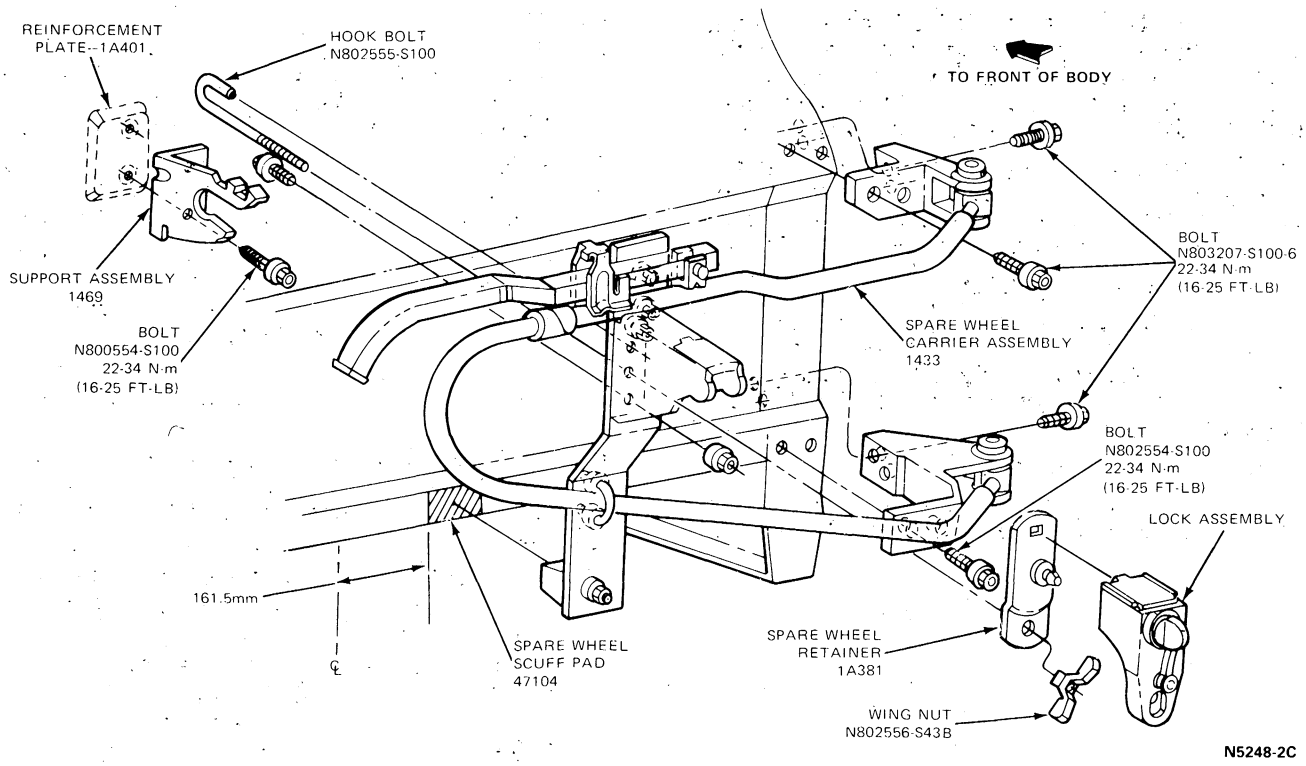
INSTALL REAR BUMPER—(RANGER/BRONCO II)

1. Remove the four M14 x 2.0 x 35 bolts attaching the inner arms to shipping bracket and remove bumper arms assembly from box. Save bolts for later use in Step 6.
2. Pry the four U-nuts from the shipping brackets with a screwdriver. Install the U-nuts on the lower flange of the frame rail (two on each frame) with chimney facing upward.
3. Slide out the throw-away shipping brackets by loosening the pickup box bolts. Retighten the pickup box bolts to 78-89 N·m (57-66 ft-lbs).
4. Cut and remove the two plastic straps that tie the two wiring assemblies and lamps to the frame lower flanges at the rearmost hole. Push lamps out of the way for bumper installation.
5. With a helper holding the bumper arms assembly, position the inner arms to the frame lower flanges and align the holes.
6. Insert the four M14 x 2.0 x 35 bolts, saved from Step 1, into the holes and hand start into the U-nuts. Tighten bolts to 100-135 N·m (74-100 ft-lbs).
7. Remove the rubber bumper from the hitch plate. Discard the rubber bumper, nut and washer.
8. Push the license plate sockets into the lamp assemblies and rotate the sockets 1/4 turn to install the rear license plate lamps to the bumper.
9. If required, peel the scuff pad from the box floor. Clean off any adhesive residue with Ford Spot Remover (B7A-19521-A) or equivalent.

PRE-DELIVERY SERVICE—LIGHT TRUCKS (Continued)

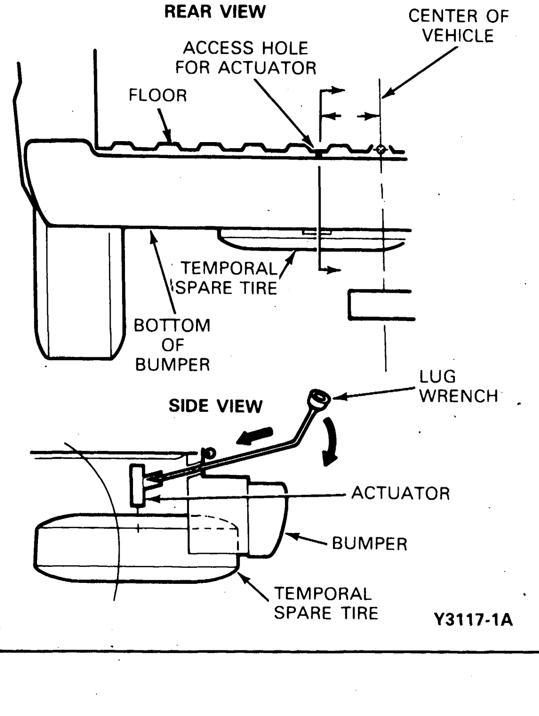
Install Swing-Away Spare Wheel Carrier—Bronco II Only

If required, install the swing-away spare wheel carrier.


REINFORCEMENT PLATE--1A401
HOOK BOLT N802555-S100
TO FRONT OF BODY
BOLT N803207-S100-6 22-34 N·m (16-25 FT-LB)
SUPPORT ASSEMBLY 1469
BOLT N800554-S100 22-34 N·m (16-25 FT-LB)
SPARE WHEEL CARRIER ASSEMBLY 1433
BOLT N802554-S100 22-34 N·m (16-25 FT-LB)
LOCK ASSEMBLY
161.5mm
℄
SPARE WHEEL SCUFF PAD 47104
SPARE WHEEL RETAINER 1A381
WING NUT N802556-S43B

N5248-2C

INSTALLATION OF UNDERBODY SPARE TIRE—AEROSTAR



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WARNING: STOW ONLY THE TEMPORAL SPARE TIRE AND WHEEL IN THE REAR UNDER BODY CARRIER. DO NOT STOW A CONVENTIONAL SPARE TIRE (FLAT OR PRESSURIZED) IN THE UNDER FRAME POSITION. DOING SO MAY CAUSE DAMAGE TO THE TIRE, REAR AXLE, OR BRAKE LINES.

PRE-DELIVERY SERVICE—LIGHT TRUCKS (Continued)

TO INSTALL TEMPORAL SPARE TIRE:

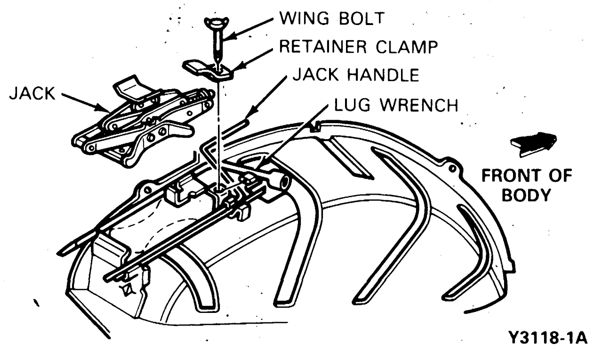
1. Insert lug wrench into actuator hole and rotate counterclockwise, while pulling on cable, until adequate cable is available.
2. Install retainer through wheel center with valve stem facing up.
3. Rotate wrench clockwise until tire is secured (raising mechanism will slip).
4. Check for proper seating against underbody bracketry and re-tighten if necessary.

WARNING: IMPROPER INSTALLATION OF THE SPARE TIRE MAY RESULT IN DAMAGE TO THE REAR AXLE, TIRE, OR BRAKE LINES.

CAUTION: Possible air seepage at the tire rim or valve may cause the spare tire to become loose in the carrier. Therefore, check the spare tire at least once a month for proper inflation. If the tire moves under hand pressure or foot kicking, it requires air. Correct the cause of seepage; then inflate the tire to the pressure recommended on the Safety Compliance Certification Label.

STOWAGE OF HOLD-DOWN HARDWARE—AEROSTAR

STOWAGE OF HOLD-DOWN HARDWARE - AEROSTAR



Check Operation of Door Latches

Be sure all doors close securely without being slammed. Check key operation in all locks.

Check Seat Belts for Proper Installation

Check that each seat belt is properly installed. If the seat belt attachment is hidden or covered, pull on the seat belt to determine that it is anchored to the vehicle.

Check Operation of Seatback Latches

Be sure latches operate properly and retain seatback.

Remove Wiper Blade Protectors

Remove the wiper blade protectors from the wiper blades.

CHASSIS OPERATIONS

Check and Top Up Fluid Levels in Manual Transmission

Clean dirt and grease from the area around the filler plug and remove the filler plug from the side of the case.

If lubricant does not flow from the filler plug hole, fill the case to the bottom of the filler hole with Standard Transmission Lubricant (SAE 80W), D8DZ-19C547-A (ESP-M2C83-C) or equivalent.

ADJUST TIRE PRESSURE TO SPECIFICATION

Be sure tire pressure agrees with specifications for the tire and vehicle model. Refer to the Specifications portion of Section 11-01, General Wheel and Tire Service or Safety Certification Label on driver's side door "B" pillar.

CHECK STEERING GEAR AND FLEX COUPLING, STEERING LINKAGE AND SUSPENSION, FOR DAMAGE OR LOOSE FASTENERS

Check jam nuts on the tie rod at the tie rod end to be sure they are tightened.

Check the steering gear attaching bolts and washers to be sure they are tightened. Also check for cracked or missing washers.

Check the linkage for tightness and proper installation of cotter pins.

Check the intermediate shaft for tightness of the upper clamp yoke bolt and nut, and lower flange bolt.

FRONT AND REAR SUSPENSION

Inspect the front and rear suspension for proper assembly and components. Check to be sure all lock tabs are bent for nut and bolt retention and that all color pins are properly installed.

CHECK FLUID LINES FOR DAMAGE, LEAKS AND PROPER POSITIONING

Check for leaking hoses and lines.

Make sure all supporting brackets for holes and lines are in place and that the hoses and lines are properly installed in the supports.

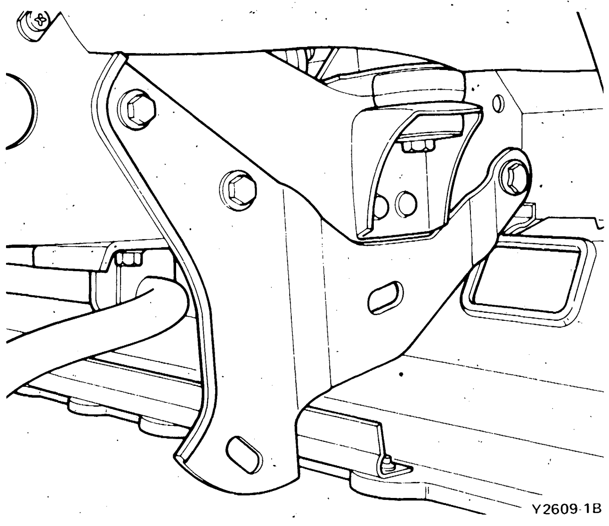
Remove Spring Insulators—F-250 and F-350 (4x4) Only

Remove and discard the spring insulators.

PRE-DELIVERY SERVICE—LIGHT TRUCKS (Continued)

REMOVE SHIPPING BRACKETS—BRONCO II

If required, remove the shipping brackets on the frame rail in the front wheel wells.



TIGHTEN ALL WHEEL NUTS TO SPECIFICATION

(Bronco, E-150-E-350, F-150—F-350)

New Vehicle Break-in

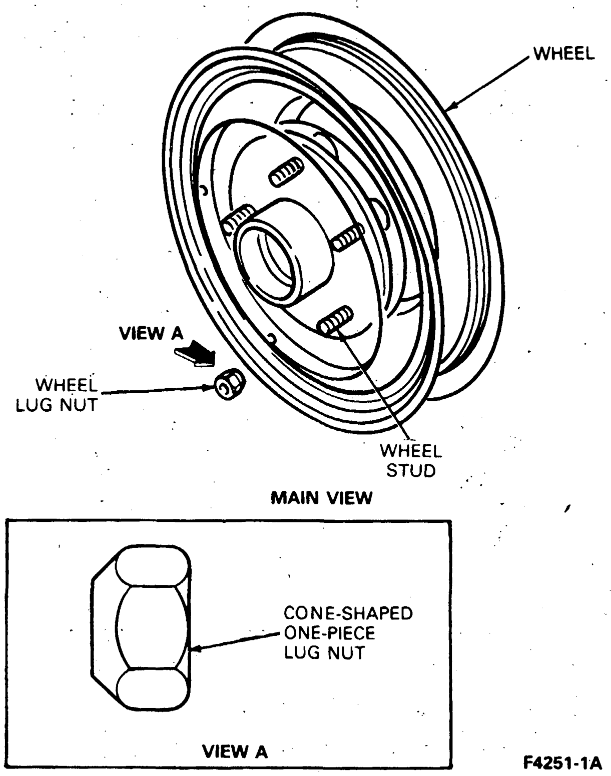
WARNING: FOR VEHICLES EQUIPPED WITH SINGLE REAR WHEELS, TIGHTEN THE WHEEL LUG NUTS AFTER 800 KM (500 MILES) OF NEW VEHICLE OPERATION ACCORDING TO THE PROCEDURES THAT FOLLOW. FOR VEHICLES EQUIPPED WITH DUAL REAR WHEELS, TIGHTEN THE WHEEL LUG NUTS TO SPECIFICATIONS AFTER 160 KM (100 MILES) AND AGAIN AFTER 800 KM (500 MILES) OF NEW VEHICLE OPERATION, AND AT THE INTERVALS SPECIFIED IN THE NON-EMISSION SCHEDULED MAINTENANCE CHART ACCORDING TO THE PROCEDURES THAT FOLLOW. THIS IS REQUIRED TO PERMIT THE WHEEL CLAMPING SYSTEM TO SEAT PROPERLY SO THAT THE WHEEL LUG NUTS WILL HOLD A UNIFORM CLAMP LOAD AND REMAIN FULLY TIGHTENED. RETIGHTENING TO SPECIFICATION IS ALSO REQUIRED AT 800 KM (500 MILES) AFTER ANY WHEEL CHANGE OR ANY OTHER TIME THE LUG NUTS HAVE BEEN LOOSENED. IMPROPERLY TIGHTENED WHEEL LUG NUTS COULD ALLOW THE WHEEL TO COME OFF WHILE THE VEHICLE IS IN MOTION, CAUSING LOSS OF CONTROL.

Wheel Replacement—F-150—F-350, E-150—E-350, and Bronco Equipped With Single Rear Wheels

WARNING: AFTERMARKET WHEEL ASSEMBLIES MAY NOT BE COMPATIBLE WITH THE VEHICLE. USE OF INCOMPATIBLE WHEEL ASSEMBLIES MAY RESULT IN EQUIPMENT FAILURE AND POSSIBLE INJURY. USE ONLY APPROVED WHEEL ASSEMBLIES.

Removal

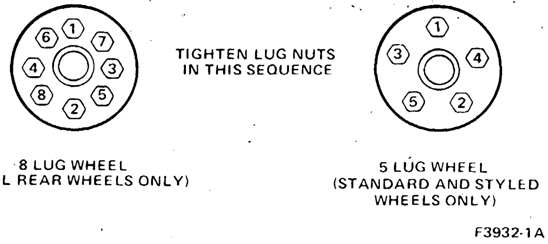
1. If equipped, remove the hub cap or wheel cover.
2. Loosen, but do not remove the wheel lug nuts.
3. Raise the vehicle until the wheel and tire clear the floor.
4. Remove the wheel lug nuts. Remove the wheel and tire from the hub and drum or hub and rotor.



PRE-DELIVERY SERVICE—LIGHT TRUCKS (Continued)

Installation

1. WARNING: WHENEVER A WHEEL IS INSTALLED, ALWAYS REMOVE ANY CORROSION, DIRT OR FOREIGN MATERIAL THAT MAY BE PRESENT ON THE MOUNTING SURFACES OF THE WHEEL OR THE SURFACE OF THE HUB, DRUM OR ROTOR THAT CONTACTS THE WHEEL. INSTALLING WHEELS WITHOUT PROPER METAL-TO-METAL CONTACT AT THE WHEEL MOUNTING SURFACES CAN CAUSE THE WHEEL LUG NUTS TO LOOSEN AND COULD ALLOW THE WHEEL TO COME OFF WHILE THE VEHICLE IS IN MOTION, CAUSING LOSS OF CONTROL.
2. Position the wheel on the hub and rotor or the hub and drum assembly.
3. Install the lug nuts making sure that the cone ends of the nuts face inward.
4. With the lug nuts loosely installed, turn the wheel until one nut is at the top of the bolt circle. Tighten the nut until snug. Tighten the remaining nuts in an alternating sequence until snug to minimize runout. Lower the vehicle to the floor.
5. Evenly tighten the nuts in the torque sequence shown below to the torque listed in the Specifications portion of this Section.



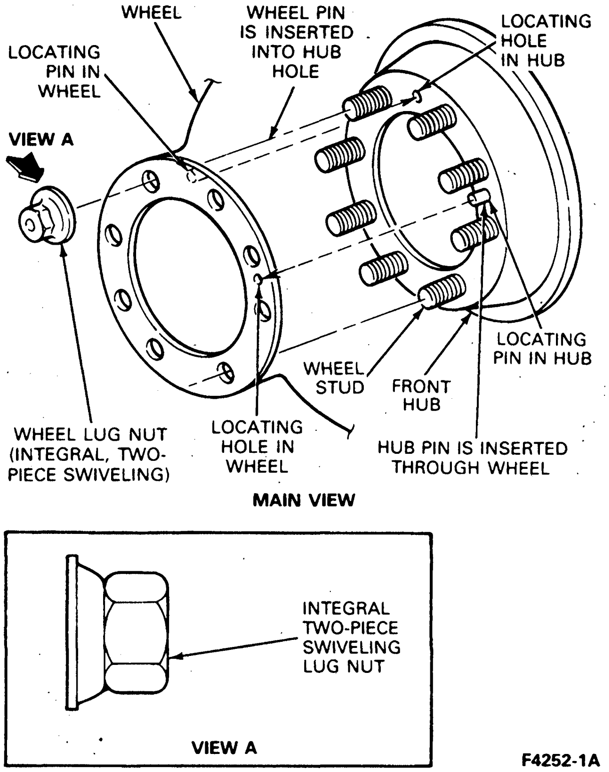
1
2
3
4
5
6
7
8
TIGHTEN LUG NUTS IN THIS SEQUENCE
1
2
3
4
5
8 LUG WHEEL (DUAL REAR WHEELS ONLY)
5 LUG WHEEL (STANDARD AND STYLED WHEELS ONLY)
F3932-1A

Front Wheel Replacement—F-350, E-350 Equipped With Dual Rear Wheels

Removal

WARNING: AFTERMARKET WHEEL ASSEMBLIES MAY NOT BE COMPATIBLE WITH THE VEHICLE. USE OF INCOMPATIBLE WHEEL ASSEMBLIES MAY RESULT IN EQUIPMENT FAILURE AND POSSIBLE INJURY. USE ONLY APPROVED WHEEL ASSEMBLIES.

WARNING: USE ONLY INTEGRAL TWO-PIECE SWIVELING LUG NUTS ON VEHICLES EQUIPPED WITH DUAL REAR WHEELS. DO NOT ATTEMPT TO USE CONE SHAPED ONE-PIECE LUG NUTS ON THESE VEHICLES. IF USED, CONE SHAPED ONE-PIECE LUG NUTS CAN COME LOOSE IN VEHICLE OPERATION. DO NOT ATTEMPT TO USE PAST MODEL WHEELS, WHICH HAVE CONE SHAPED LUG NUT SEATS ON THIS VEHICLE. DO NOT ATTEMPT TO USE PRESENT DESIGN WHEELS AND LUG NUTS ON PAST MODEL WHEEL HUBS. ATTEMPTED USE OF INTERMIXED WHEELS CAN LEAD TO DAMAGE TO THE WHEEL MOUNTING SYSTEM AND COULD RESULT IN WHEELS COMING LOOSE.



WHEEL
WHEEL PIN IS INSERTED INTO HUB HOLE
LOCATING HOLE IN HUB
LOCATING PIN IN WHEEL
VIEW A
LOCATING PIN IN HUB
WHEEL STUD
FRONT HUB
WHEEL LUG NUT (INTEGRAL, TWO-PIECE SWIVELING)
LOCATING HOLE IN WHEEL
HUB PIN IS INSERTED THROUGH WHEEL
MAIN VIEW
INTEGRAL TWO-PIECE SWIVELING LUG NUT
VIEW A
F4252-1A

1. If equipped, remove the hub cap or wheel cover.
2. Loosen, but do not remove the wheel lug nuts.
3. Raise the vehicle until the wheel and tire clear the floor.
4. Remove the wheel lug nuts. Remove the wheel and tire from the hub and rotor.

PRE-DELIVERY SERVICE—LIGHT TRUCKS (Continued)

Installation

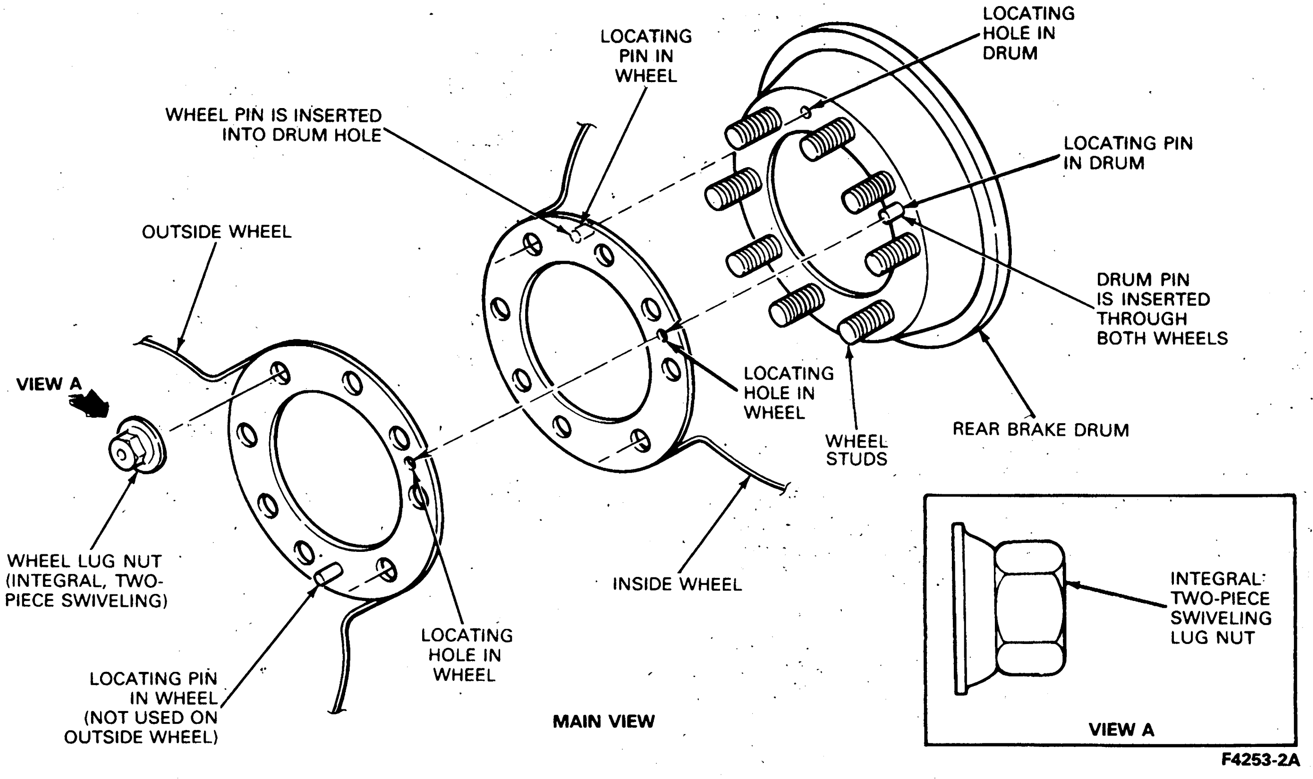
1. **WARNING: WHENEVER A WHEEL IS INSTALLED, ALWAYS REMOVE ANY CORROSION, DIRT OR FOREIGN MATERIAL THAT MAY BE PRESENT ON THE MOUNTING SURFACES OF THE WHEEL OR THE SURFACES OF THE HUB AND ROTOR THAT CONTACTS THE WHEEL. INSTALLING WHEELS WITHOUT PROPER METAL-TO-METAL CONTACT AT THE WHEEL MOUNTING SURFACES CAN CAUSE THE WHEEL LUG NUTS TO LOOSEN AND COULD ALLOW THE WHEEL TO COME OFF WHILE THE VEHICLE IS IN MOTION, CAUSING LOSS OF CONTROL.**
2. Mount the front wheel on the front hub and rotor with the wheel dish facing inboard. Align the wheel with the small indexing hole (located in the wheel between the stud holes) with the alignment pin in the hole in the gap. Make sure that the wheel is flush with the hub mounting surface so there is no gap between the hub and wheel.
3. Install and tighten until snug the 8 integral two-piece swiveling lug nuts (nut and washer assembly).
4. With the lug nuts loosely installed, turn the wheel until one nut is at the top of the bolt circle. Tighten the nut until snug. Tighten the remaining lug nuts in an alternating sequence until snug to minimize runout. Lower the vehicle to the floor.
5. Evenly tighten the nuts in the torque sequence shown in Illustration to the torque listed in the Specifications portion of this Section.

Rear Wheel Replacement—F-350, E-350 Equipped With Dual Rear Wheels

Removal

WARNING: AFTERMARKET WHEEL ASSEMBLIES MAY NOT BE COMPATIBLE WITH THE VEHICLE. USE OF INCOMPATIBLE WHEEL ASSEMBLIES MAY RESULT IN EQUIPMENT FAILURE AND POSSIBLE INJURY. USE ONLY APPROVED WHEEL ASSEMBLIES.

WARNING: USE ONLY INTEGRAL TWO-PIECE SWIVELING LUG NUTS ON VEHICLES EQUIPPED WITH DUAL REAR WHEELS. DO NOT ATTEMPT TO USE CONE SHAPED ONE-PIECE LUG NUTS ON THESE VEHICLES. IF USED, CONE SHAPED ONE-PIECE LUG NUTS CAN COME LOOSE IN VEHICLE OPERATION. DO NOT ATTEMPT TO USE PAST MODEL WHEELS, WHICH HAVE CONE SHAPED LUG NUT SEATS, ON THIS VEHICLE. DO NOT ATTEMPT TO USE PRESENT DESIGN WHEELS AND LUG NUTS ON PAST MODEL WHEEL HUBS. ATTEMPTED USE OF INTERMIXED WHEELS CAN LEAD TO DAMAGE TO THE WHEEL MOUNTING SYSTEM AND COULD RESULT IN WHEELS COMING LOOSE.

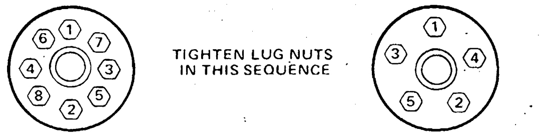

LOCATING PIN IN WHEEL
LOCATING HOLE IN DRUM
WHEEL PIN IS INSERTED INTO DRUM HOLE
LOCATING PIN IN DRUM
OUTSIDE WHEEL
DRUM PIN IS INSERTED THROUGH BOTH WHEELS
VIEW A
LOCATING HOLE IN WHEEL
WHEEL STUDS
REAR BRAKE DRUM
WHEEL LUG NUT (INTEGRAL, TWO-PIECE SWIVELING)
INSIDE WHEEL
INTEGRAL TWO-PIECE SWIVELING LUG NUT
LOCATING HOLE IN WHEEL
LOCATING PIN IN WHEEL (NOT USED ON OUTSIDE WHEEL)
MAIN VIEW
VIEW A
F4253-2A

PRE-DELIVERY SERVICE—LIGHT TRUCKS (Continued)

1. If equipped, remove the hub cap or wheel cover.
2. Loosen, but do not remove the wheel lug nuts.
3. Raise the vehicle until the wheels and tires clear the floor.
4. Remove the wheel lug nuts. Remove the wheels and tires from the hub and drum.

Installation

1. **WARNING: WHENEVER A WHEEL IS INSTALLED, ALWAYS REMOVE ANY CORROSION, DIRT OR FOREIGN MATERIAL THAT MAY BE PRESENT ON THE MOUNTING SURFACES OF THE WHEELS OR THE SURFACES OF THE HUB AND DRUM THAT CONTACTS THE WHEEL. INSTALLING WHEELS WITHOUT PROPER METAL-TO-METAL CONTACT AT THE WHEEL MOUNTING SURFACES CAN CAUSE THE WHEEL LUG NUTS TO LOOSEN AND COULD ALLOW THE WHEEL TO COME OFF WHILE THE VEHICLE IS IN MOTION, CAUSING LOSS OF CONTROL.**
2. Mount the inner wheel on the rear hub with the wheel dish facing inboard. Align the wheel with small indexing hole (located in the wheel between the stud holes) with the alignment pin in the hole in the hub. Make sure that the wheel is flush with the hub mounting surface so there is no gap between the hub and wheel.
3. Install the outer rear wheel with the wheel dish facing inboard so it is flush against the inner wheel with the hub alignment pin protruding through the wheel index hole.
4. Install and tighten until snug the 8 integral two-piece swiveling lug nuts (nut and washer assembly).
5. With the lug nuts loosely installed, turn the wheel until one nut is at the top of the bolt circle. Tighten the nut until snug. Tighten the remaining lug nuts in an alternating sequence until snug to minimize runout. Lower the vehicle to the floor.
6. Evenly tighten the nuts in the torque sequence shown below, to the torque listed in Specifications of Section 11-01, General Wheel and Tire Service.



8 LUG WHEEL (DUAL REAR WHEELS ONLY)

5 LUG WHEEL (STANDARD AND STYLED WHEELS ONLY)

F3932-1A

Lug Nut Torque Requirement—(Bronco, E-150—E-350, F-150—F-350)

WARNING: LUG NUTS MUST BE RETIGHTENED TO PROPER TORQUE SPECIFICATION AT 800 KM (500 MILES) OF NEW VEHICLE OPERATION (100 MILES OR 160 KM AND 500 MILES OR 800 KM FOR VEHICLES WITH DUAL REAR WHEELS) AND AT THE INTERVALS SPECIFIED IN THE NON-EMISSION SYSTEM SCHEDULED MAINTENANCE CHART.

Retighten to proper torque specifications at 800 km (500 miles) after any wheel change or any other time the lug nuts have been loosened.

Improperly tightened wheel lug nuts could allow the wheel to come off while the vehicle is in motion, causing loss of control.

Wheel Inspection and Maintenance—(Bronco, E-150—E-350, F-150—F-350)

Check the wheel nut torque and retighten the lug nuts to the specified torque according to procedures listed in the Removal and Installation portion of this Section. Refer to Section 50-02, Pre-Delivery and Non-Emission System Scheduled Maintenance for the torque maintenance schedules.

CAUTION: Replace wheels if they are bent, cracked, leaking air or heavily rusted or if the lug nuts often become loose. Do not use bent wheels that have been straightened and do not use inner tubes in leaking wheels. Do not replace wheel with used wheels. Wheels that have been straightened or are leaking air or are used, may have structural damage and could fail without warning. Check for damage that could affect the runout of the wheels. Wobble or shimmy will eventually damage the wheel bearings.

Incomplete Vehicles

WARNING: RETIGHTEN ALL LUG NUTS TO SPECIFICATION ON DUAL REAR WHEEL VEHICLES PRIOR TO DELIVERY. DUAL REAR WHEEL VEHICLES MAY BE SHIPPED WITH THE OUTER REAR WHEELS REMOVED AND, THEREFORE, THE LUG NUTS MUST BE RETIGHTENED BEFORE THE VEHICLE IS DELIVERED. ALSO, SOME BODY BUILDERS OR MOTOR HOME MANUFACTURERS WHO ADD SECOND UNIT BODIES TO F-350 CHASSIS CABS OR E-350 CUTAWAYS MAY REMOVE THE WHEELS DURING SECOND UNIT BODY INSTALLATION OR MAY REPAINT THE WHEELS. IT IS IMPERATIVE THAT ALL WHEEL LUG NUTS BE RETIGHTENED PRIOR TO FINAL DELIVERY. IMPROPERLY TIGHTENED LUG NUTS COULD LOOSEN AND COULD ALLOW THE WHEELS TO COME OFF WHILE THE VEHICLE IS IN MOTION, CAUSING LOSS OF CONTROL.

PRE-DELIVERY SERVICE—LIGHT TRUCKS (Continued)

ROAD TEST OPERATIONS

Check Steering Column Lock—(Bronco, E-150—E-350, F-150—F-350)

Place transmission selector lever in PARK position on vehicles equipped with column shift automatic transmission; place in any position if equipped with manual transmission. Turn key to LOCK position. Manual transmission and floor shift models are equipped with lock button on the left side of steering column, which must be depressed first.

CHECK STEERING COLUMN LOCK (Ignition Key Release Button) (KEY WARNING BUZZER IF SO EQUIPPED)

Place transmission selector lever in PARK position on vehicle equipped with automatic transmission; place in any position if equipped with manual transmission. Turn key to LOCK position. All vehicles are equipped with a lock button on the left side or underside of steering column, which must be depressed first.

Turn the steering wheel left or right slightly, until it snaps into the lock detent.

Check to see if the steering wheel is locked in both directions. The selector lever will remain locked. The key can be removed from the ignition lock in LOCK position only. Verify activation of warning buzzer if key is left in lock cylinder and door is opened.

Check Starting of Engine in Park and Neutral—(Automatic Transmission Only)

Engine should start with shift lever in **NEUTRAL** and/or **PARK** positions only. If this is not the case, verify that the manual linkage adjustment is to specification and readjust as required in "D" (DRIVE) position for C6 or Ⓓ (OVERDRIVE) position for AOD. If condition persists for C6 transmissions, adjust the neutral start switch in the neutral position. Refer to the Maintenance portion of Section 50-17, Automatic Transmission, for the neutral start switch adjustment procedure. AOD neutral start switch is not adjustable.

CHECK STARTING OF ENGINE IN NEUTRAL (MANUAL TRANSMISSION ONLY)

Engine should start only when clutch pedal is fully depressed.

CHECK OPERATION OF HORN, WINDSHIELD WIPER AND WASHER, REAR WINDOW WIPER WASHER (IF INSTALLED), LIGHTS, SIGNALS, HAZARD FLASHER AND INSTRUMENTS

Horns

Check to be sure horn(s) sound at all contact points.

Windshield Wiper and Washer

Check for proper operation, including wiper sweep and park.

Rear Window Wiper and Washer (If Installed)

Check for proper operation including wipe sweep and park.

Lights and Signals

Check switches and brightness of lamps, including operation of oil pressure and alternator warning lights. Check detent action and return of turn signal lever by making full left and full right turn during road test.

Hazard Flasher

Check for proper operation.

Speedometer, Odometer and Tachometer

Verify that gauges operate and needles do not bounce.

PRE-DELIVERY SERVICE—LIGHT TRUCKS (Continued)

Check Throttle Operation and Idle Return

Refer to chart below.

Inspect the throttle linkage for proper installation. Remove the air cleaner and, with the accelerator fully depressed, observe the position of the carburetor throttle plate(s). They should be vertical (wide-open position).

Check accelerator for sticking or binding, full return and sufficient height to fully open throttle.

DIAGNOSTIC PROCEDURE ACCELERATOR PEDAL TO CARBURETOR THROTTLE CASE	
• Accelerator pedal is hard to push down or has a rough/raspy or sticky feel.	• Be sure that the disconnected end of the cable or its spring does not come into contact with any of the surrounding parts. • Operate the pedal by foot. • If cable operation is smooth, refer to the carburetor diagnosis procedures in the appropriate carburetor section. • If the condition reoccurs (being sure disconnected end of cable has not come into contact with anything), check the foot pedal assembly for free operation. If the pedal operation is free, replace the cable.
• High engine idle speed.	• If the cable ball socket extends beyond the throttle lever ball stud, refer to the carburetor diagnosis procedures in the appropriate carburetor section. • If the socket does not extend beyond the stud, check the foot pedal assembly for free operation. If the pedal operation is free, replace the cable.

NOTE: Accelerator cable should not be lubricated and it is not serviceable.

CY2742-2B

CHECK CHOKE LINKAGE FOR FREEDOM OF MOVEMENT

Physically check all choke linkages for freedom of operation.

CHECK OPERATION OF HEATER, AIR CONDITIONER DEFROSTER, VENTILATION SYSTEM, RADIO, SEAT BELT WARNING SYSTEM AND ALL OTHER OPTIONAL EQUIPMENT

Bronco, E-150—E-350, F-150—F-350

Heater, Defroster

Place selector lever in HEAT position. Move blower switch through each speed position and check for corresponding change in air discharge at outlets. Move temperature control lever through entire range and check for proper change in discharge air temperature. Repeat this procedure in DEFROST position and check for air discharge through defroster nozzles.

Air Conditioner

Place function selector lever in A/C and the temperature selector in COOL. Increase engine speed to approximately 1500 RPM. Econoline only: After approximately one minute, check the sightglass. A continuous or large amount of bubbles during compressor operation indicates a refrigerant undercharge. If an undercharge is found, check and repair any leaks, evacuate the system, and charge with the proper amount of Refrigerant R-12. If the sightglass is clear, a cold suction tube at the compressor indicates that the system is working properly. F-Series, Bronco and Econoline: After approximately one minute, check for cool air discharge at each A/C register in each blower speed position. Also, check register(s) for direction and volume control. Check temperature modulation by moving control lever slowly to WARM position. Return lever to COOL position.

Fresh Air Vents

Check all vents (if so equipped) by operating vent controls.

PRE-DELIVERY SERVICE—LIGHT TRUCKS (Continued)

Ranger/Bronco II

Air Conditioner

Place function selector lever in panel, temperature control lever in COOL, blower switch in HIGH and push in the A/C button until it engages. Increase engine speed to approximately 1500 RPM. After approximately one minute, check for cool air discharge at each panel register. Move the blower switch through each speed position and check for corresponding change in air discharge at outlets. Check temperature modulation by moving the control lever slowly to WARM position. Return lever to COOL position. With blower on HIGH, move function selector lever to floor and defrost positions. Check for air discharge from floor and defrost outlets.

Heater/Defroster/Vent

Place outside air lever in VENT-HEAT position. Move blower switch through each speed position and check for corresponding change in air discharge at panel register outlets. Move temperature control lever through entire range and check for proper change in discharge air temperature. Repeat this procedure in HEAT and in DEFROST position by moving the function selector lever, and check for air discharge through floor outlets and defroster nozzles.

Aerostar

Heater, Defroster

Place the mode lever in VENT position. Move blower switch through each speed position and check for corresponding change in air discharge at panel register outlets. Move temperature control lever through entire range and check for proper change in discharge air temperature. Repeat this procedure in HEAT and in DEFROST position and check for air discharge through floor outlets and defroster nozzles. Move mode to the OFF position. Check to assure the blower motor turns off.

Air Conditioner

Place mode lever in the NORM A/C position, temperature control lever in cool and blower switch in HI. Increase engine speed to approximately 1500 RPM. After approximately one minute, check for cool air discharge at each panel register. Move the blower switch through each speed position and check for corresponding change in air discharge at outlets. Check temperature modulation by moving the control lever slowly to warm position. With blower on HI, move mode lever to HEAT and defrost positions. Check for air discharge from floor and defrost outlets. Return control lever to cool position. Move mode lever to MAX A/C. Check for an increase in air flow indicating air being recirculated in the vehicle. Move the mode lever to VENT. Check to assure air is discharged from each panel register and that the air conditioning compressor is off. Move the mode lever to the OFF position. Check to assure that the blower motor is off and the outside air door is closed.

Radio

Check for proper operation of radio and tape player, if so equipped. Set radio pushbuttons for local stations.

Seat and Shoulder Belts

Check seat belt warning system for proper operation. Check automatic retractors for full extension, retraction and retention of belt. Check buckle and clasp for proper retention, release, and length adjustment.

CHECK BRAKES (INCLUDING PARKING BRAKE AND WARNING LIGHT)

Check foot brake pedal height before road testing.

Avoid sudden hard stops—make slow, gradual stops. It may be necessary to make a few reverse stops to fully adjust the rear brakes.

Then check and correct the following, as required. Vehicle pull in either direction, harshness or noise, excessive pedal effort or spongy, feel and operation of the warning light.

Check the operation of the parking brake and indicator light. If equipped with an indicator light, be sure it glows when parking brake is engaged.

CHECK STEERING CONTROL

Road test the vehicle, and check for harshness, noise, wander or free play. Check steering wheel return for stiffness or inconsistency in either direction. Correct as required.

CHECK DRIVEABILITY DURING ROAD TEST (INCLUDING FAST IDLE RETURN TO CURB IDLE DURING WARM-UP). IF AN OVERT IDLE SPEED PROBLEM EXISTS, CHECK AND ADJUST ENGINE IDLE SPEEDS (INCLUDING T.V. LINKAGE WHEN NECESSARY) TO SPECIFICATIONS SHOWN ON THE VEHICLE EMISSION CONTROL INFORMATION DECAL

CHECK ENGINE DRIVEABILITY—GASOLINE ENGINES

During start-up, acceleration, cruise and deceleration, check for unsatisfactory engine performance such as:

- Prolonged starting (cranking).
- Hard starting (does not quite catch).
- False starts (quits immediately after starting).
- Idles rough, stalls.
- Idles unusually slow.
- Idles unusually fast (races, pulls).
- Stumbles, backfires, stalls or hesitates during acceleration.
- Spark knock during light-to-moderate acceleration.
- Sluggish, poor acceleration.
- Surges or lopes.

PRE-DELIVERY SERVICE—LIGHT TRUCKS (Continued)

- Hissing, unusual noises or vibration under hood.
- Smokes (Gasoline Engine Only).
- Does not shift properly (hard shifting or engaging, delays or jerks).
- Accessory drive belt noise, tighten drive belts.
- Any other unsatisfactory condition observed by technician.

If an overt idle speed problem exists, check and adjust engine idle speeds to specifications shown on the Vehicle Emission Control Information Decal.

ENGINE IDLE SPEEDS—CHECK AND ADJUST

Refer to the Engine/Emissions Diagnosis Manual for engine idle speed adjustment procedures.

CHECK ENGINE DRIVEABILITY—DIESEL ENGINES

During start-up, acceleration, cruise and deceleration, check for unsatisfactory engine performance such as:

- Prolonged starting (cranking).
- Hard starting (does not quite catch).
- False starts (quits immediately after starting).
- Idles rough, stalls.
- Idles unusually slow.
- Idles unusually fast (races, pulls) when warm.
- Stumbles, stalls or hesitates during accelerations.
- Sluggish, poor acceleration.
- Surges or lopes.
- Excessive white smoke after 60 seconds.
- Excessive black smoke.
- Hissing, unusual noises or vibration under hood.
- Does not shift properly (hard shifting or engaging, delays or jerks).
- Any other unsatisfactory condition observed by mechanic.

Check Automatic Transmission or Manual Transmission and Clutch Performance

Selector Linkage

On all light trucks, six detent positions should be felt as the lever moves through its positions on the C6 and Automatic Overdrive Transmissions.

If equipped with manual transmission, check for smooth shift through all gears.

AUTOMATIC TRANSMISSION—C-6

Check Transmission Initial Engagement

Initial engagement checks are made to determine if initial band and clutch engagements are smooth.

Run the engine until its normal operating temperature is reached. With the engine at the correct idle speed, shift the transmission selector from N to D, 1 and R. Observe the initial band and clutch engagements. Band the clutch engagements should be smooth in all positions.

Check Shift Points

Check the minimum throttle upshifts in D (Drive). The transmission should start in first gear, shift to second and then shift to third (or finally shift to fourth on AOD equipped vehicles) within the shift points specified in the Service Specifications Manual.

With the transmission in third gear, depress the accelerator pedal through the detent (to the floor). The transmission should shift from third to second or third to first, depending on the transmission type and vehicle speed.

AUTOMATIC TRANSMISSION—AOD

Check Transmission Initial Engagement

Initial engagement checks are made to determine if initial band and clutch engagements are smooth.

Run the engine until its normal operating temperature is reached. With the engine at the correct idle speed, shift the selector lever from N to 2, Ⓓ, 1, D, and R. Observe the initial band and clutch engagements. Engagements in all positions should be smooth.

Check Shift Points

Check the minimum throttle upshifts in Ⓓ (Overdrive). The transmission should start in first gear, shift to second, and then shift to third within the shift points specified. The shift into overdrive occurs when the vehicle approaches the desired cruising speed and the driver eases up on the accelerator pedal. Refer to the Technical Service Bulletin—Special Specifications Issue for shift point speeds.

The converter clutch can apply in third gear as well as in fourth. Because of this feature, the transmission may be sensed executing as many shifts (in the Ⓓ overdrive position) as would a five-speed transmission.

With transmission in third or fourth gear, depress accelerator pedal through the detent (to the floor). The transmission should shift to second or first gear, depending on vehicle speed.

PRE-DELIVERY SERVICE—LIGHT TRUCKS (Continued)

Manual Transmission and Clutch

Clutch

Check for full return of clutch pedal and disengagement of the clutch. Be sure clutch pedal isn't contacting starter interlock bracket. Check for chatter, slipping, excessive pedal effort or noise.

Shift Timing and Quality

If equipped with manual transmission, check for smooth shifting through all gears. Both up and down shifts should be smooth.

CHECK TRANSFER CASE PERFORMANCE

(4x4 Vehicles Only)

Check 2H, 4H and 4L shift positions for drive capability. With the manual shift transfer case lever in N, there should be no power to wheels. Check electronic shift transfer case for proper operation.

CHECK FOR SQUEAKS AND RATTLES

Through the road test and especially on rough roads, listen for squeaks or rattles.

Listen for anything loose and for objectionable wind noise or vibration.

CHECK FOR DRIVE BELT NOISE—TIGHTEN LOOSE BELTS

Check for belt noise. Check for specified belt tension. Refer to the Adjustments portion of Section 27-06, Accessory Drive Belt Service.

CHECK EXHAUST SYSTEM FOR LEAKS

Check for leaks, noise or ground-out to adjacent components. Inspect for proper assembly of components.

APPEARANCE OPERATIONS

WASH AND PERFORM DETAILED CLEANUP OF INTERIOR AND EXTERIOR

Remove all shipping covers from vehicle. Do not use a knife or sharp object to remove the plastic protective wrap from the leather wrapped steering wheel.

Remove the windshield markings and tapes. Wash the vehicle and check for leaks. Inspect metal and paint condition, and touch up chips and scratches. Check for excess sealer.

CAUTION: Do not use steel wool, abrasive type cleaners, or strong detergents containing highly alkaline or caustic agents on chrome-plated materials, aluminum wheels, or anodized aluminum parts because the protective coating may be damaged and cause discoloration or paint deterioration.

TOUCH UP MINOR PAINT BLEMISHES—BRUSH, AEROSOL CAN AND/OR SPOT POLISH

Check for any imperfections in paint and metal finish.

Correct minor chips and scratches with brush or spray can touch-up paint and polish out any surface blemishes.

CHECK FOR NECESSARY OWNER INFORMATION MATERIAL IN GLOVE BOX

Check glove compartment for:

- Warranty Information Booklet
- Owner Card
- Owner Guide
- Consumer Information Folder
- Other Owner Publications
- Incomplete Vehicle Booklet (if necessary)

NOTE: Assure that tags referring to TOE-IN reset be hung in the cab visible to the customer or Body Builder.

See that the starting instructions sleeve is on the left-hand visor.

REMOVE PROTECTIVE COVERS (SEAT AND CARPET)

Remove the plastic covers from the upholstery. Be sure that there are no stains or dirt on the upholstery.

Remove protective covers from the carpeting and make sure the carpet is clean.

PRE-DELIVERY SERVICE—LIGHT TRUCKS (Continued)

ECONOLINE SCHOOL BUS

Check/Inspect the Vehicle as Shown: Perform Specified Adjustments When Required.

UNDERHOOD OPERATIONS

☐ Check emission control system for loose, missing or damaged components.
☐ Check radiator coolant level and top up as required.
☐ Check carburetor linkage and choke control — adjust as required or perform warranty repair.
☐ Check and adjust drive belt tension.
☐ Check and set initial ignition timing — use oscilloscope and/or meter.
☐ Check carburetor idle speed adjustments — adjust if necessary.
☐ Check steering flex coupling for proper assembly.
☐ Check engine oil level — fill as required.
☐ Check brake master cylinder fluid level — fill as required.
☐ Check windshield washer reservoir fluid level — fill as required.
☐ Check for 12.45 open circuit voltage maintenance-free battery. Recharge if necessary (12.30 sp. gr. on non-maintenance-free battery).
☐ Check battery cables for tightness and proper assembly — correct as necessary.
☐ Check electrical and vacuum connections and routing.
☐ Check power steering lines for proper routing and leaks and correct as necessary.
☐ Check power steering reservoir fluid level and fill as required.
☐ Check automatic transmission fluid level — fill as required.
☐ Check lines, fittings, connections and components for leaks.
☐ Check cooling system for leaks.

BODY OPERATIONS

☐ Check hood alignment and lock operation.
☐ Check headlamp aim and adjust as required.
☐ Check seat belts for proper installation and operation.
☐ Check operation of seats.

CHASSIS OPERATIONS

☐ Check manual transmission fluid level — fill as required.
☐ Check axle lube level — fill as required.
☐ Check lines, fittings, connections and components on underside for proper assembly and leaks.
☐ Check front wheel bearing adjustment.
☐ Check manual steering gear housing lubricant and fill as required.

CHASSIS OPERATIONS (Cont'd)

☐ Check steering mounting, stop adjustment, linkage and connections including clear vision.
☐ Check brake lines and hoses for proper assembly — correct as required.
☐ Check front and rear spring U-bolt torque.
☐ Check exhaust system for routing and leaks.
☐ Lube rear spring pins and all chassis components.
☐ Inspect driveline for proper assembly.
☐ Torque rear axle shaft flange bolts.
☐ Check tires and tire pressures — adjust pressures as required.
☐ Check and adjust clutch pedal free play and total travel.
☐ Check front-wheel toe-in and adjust as required.
☐ Torque wheel nuts to specification.

ROAD TEST OPERATIONS

☐ Check engine driveability during road test (including fast idle return to curb during warm-up).
☐ Check neutral start switch operation (automatic transmission)
☐ Check operation of all lights, turn signals, hazard flashers and gauges.
☐ Check steering column lock.
☐ Check parking brake operations.
☐ Check horn, windshield wipers and washer operation.
☐ Check brake, clutch and accelerator pedal operation.
☐ Check transmission shift operation.
☐ Check engine performance — see emission compliance requirements.
☐ Check steering control.
☐ Check for squeaks and rattles.
☐ Check all instruments for proper operation.
☐ Check radio operation (if so equipped).
☐ Check heater, air conditioner, defroster, ventilation system, seat belt warning system and all other optional equipment.
☐ After road test, check for fluid leaks — correct as necessary.

APPEARANCE OPERATIONS

☐ Inspect for interior and exterior metal and paint damage and touch up as required (chassis only).
☐ Check glove compartment for warranty facts booklet, owner-card and owner publications.

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PRE-DELIVERY SERVICE—ECONOLINE SCHOOL BUS

Underhood Operations

Check Emission Control System for Loose, Missing or Damaged Components

Visually check vacuum and electrical connections to insure system integrity.

Check Radiator Coolant Level and Top-Up as Required

On E-150, E-250 and E-350 downflow radiators, (vertical tubes) coolant level should be maintained at 3/4 to 1/2 inches below the pressure cap seat in the radiator filler neck.

On cooling systems equipped with a coolant recovery system, it is not necessary to have coolant in the overflow reservoir.

Check Carburetor Linkage and Choke Control—Adjust as Required

Inspect the throttle linkage for proper installation. Remove the air cleaner and, with the accelerator fully depressed, observe the position of the carburetor throttle plate(s). They should be vertical (wide-open position).

Check accelerator for sticking or binding, full return and sufficient height to fully open throttle.

Physically check all choke linkages for freedom of operation.

Check and Adjust Drive Belt Tension

Refer to Section 27-06 Accessory Drive Belt Service, for drive belt checking and adjustment procedures.

Check and Set Initial Timing

Check and set initial engine timing with an oscilloscope and/or meter. Refer to the Engine/ Emissions Diagnosis* manual.

Check Carburetor Idle Speed Adjustments

Refer to the Engine/Emissions Diagnosis manual for engine idle speed adjustment procedures.

Check Steering Flex Coupling

Check the steering flex coupling for proper assembly and service if required.

Check Engine Oil—Gasoline Engines

On all engines, the oil level should be above the AOD range on the dipstick. Add oil as required.

Check Engine Oil Level—6.9L Diesel Engine

To check the engine oil level accurately, the following procedure is recommended:

1. Have engine at normal operating temperature.
2. Park vehicle on level surface.
3. Allow at least fifteen (15) minutes after engine shutdown, to assure that oil contained in the upper parts of the engine has returned to the oil pan.
4. Pull dipstick, wipe clean and reinsert fully with dipstick loop directed inboard.
5. Withdraw and read dipstick.
6. Maintain the oil level between the "FULL" and "ADD" marks on the dipstick by adding oil as required. (The distance between the "ADD" and "FULL" marks on the dipstick represent two (2) quarts.

CAUTION: DO NOT OVERFILL. If the oil level exceeds the "FULL" mark oil consumption may result.

Check Brake Master Cylinder Fluid Level

Inspect the translucent master cylinder reservoir. The fluid should be at the maximum level line of the reservoir. If fluid is required, add only Heavy Duty Brake Fluid, C6AZ-19542-A (ESA-M6C25-A) or an equivalent D.O.T. 3 brake fluid.

NOTE: Fluid level will decrease as the brake linings wear. This is a normal condition.

Check Windshield and Rear Window Washer Reservoir Level

Check the windshield washer reservoir fluid and fill as required.

Check Battery Charge

Non-Maintenance Free Battery

With battery temperature at 27°C (80°F) the battery should have a specific gravity reading of not less than 12.30. If the battery requires charging, refer to Specifications in this Section for battery charging rates.

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*Can be purchased as a separate item.

PRE-DELIVERY SERVICE—ECONOLINE SCHOOL BUS (Continued)

Maintenance Free Battery

With the engine off, turn headlamps on for 10 seconds and wait for five minutes to stabilize the battery. Place voltmeter leads on the battery terminals and check for open circuit voltage. The minimum open circuit voltage is 12.45. If the battery is below 12.45 open circuit voltage, recharge according to the allowable battery charge time schedule for maintenance free batteries. Refer to Specifications in Section 31-02, Batteries for battery charge time schedule. Do not exceed a 30 amp charge rate. If gassing or spewing of the electrolyte occurs during charging, the charge rate must be reduced.

Check Battery Cables for Tightness and Proper Assembly

Check the battery cables for tightness and proper assembly. Correct as required.

Check Electrical and Vacuum Connections and Routing

Check the connections and the routing of all electrical and vacuum connections. Correct as required.

Check Power Steering Lines for Proper Routing and Leaks

Check the power steering lines for proper routing and leaks. Correct as required.

Check Power Steering Reservoir Fluid Level

With engine off, remove cap from power steering reservoir and wipe dipstick clean. Reinstall cap and remove again to check fluid level on dipstick.

With power steering fluid at normal operating temperatures (80°-110°C [176°-240°F]) check "hot" side of dipstick. Fluid level should be at or between the "Add" line and the "full" line. If level indicated is below the "Add" line, add fluid to proper range. Use Automatic Transmission Fluid, Ford Part Number XT—1-QF, Specification Number ESW-M2C33-F, or equivalent.

CHECK AUTOMATIC TRANSMISSION FLUID LEVEL

CAUTION: Vehicle should not be driven if fluid level is below the "DO NOT DRIVE" hole.

Transmission—Operating Temperature

The automatic transmission should be checked at an operating temperature of 66° to 77°C (150° to 170°F) (dipstick is hot to the touch). The operating temperature may be obtained by driving 24-32 km (15 to 20 miles) of city-type driving with the outside temperature above 10°C (50°F).

CAUTION: If vehicle has been operated for an extended period at high speed, or in city traffic in hot weather, or vehicle is being used to pull a trailer, to obtain an accurate reading, the fluid has to cool, usually about 30 minutes after engine has been turned off.

Transmission—Room Temperature

If the transmission is not at an operating temperature of 66° to 77°C (150° to 170°F) and it becomes necessary to check the fluid level (such as pre-delivery), the fluid may be checked at room temperature, 21° to 35°C (70° to 95°F) (dipstick cool to touch).

Dipstick Reading

The fluid level on the dipstick should be within the cross hatched area at operating temperature. The fluid level on the dipstick should read between the holes at room temperature.

Check the fluid as follows:

1. With the transmission in PARK, engine at idle rpm, foot brakes applied, and vehicle on level surface, move the transmission selector lever through each range, allowing time in each range to engage transmission. Return to PARK, applying parking brake fully, and block the wheels. Do not turn off the engine during the fluid level check.
2. Clean all dirt from the transmission fluid dipstick cap before removing the dipstick from the filler tube.
3. Pull the dipstick out of the tube, wipe it clean, and push it all the way back into the tube. Be sure it is fully seated.
4. Pull the dipstick out of the filler tube again, and check the fluid level.

IMPORTANT: The fluid level indication on the dipstick will be different at operating temperature and room temperature. For the correct fluid level reading on the dipstick, follow the appropriate instructions stated previously.

Before adding fluid, be sure that the correct type will be used. If in doubt, check the Vehicle Certification Label affixed to the left front door lock face panel or door pillar for the Transmission Code. Also, the fluid is stamped on the dipstick.

For C6 automatic transmission (Code G), and the Automatic Overdrive Transmission (Code T), use DEXRON®II or equivalent.

CAUTION: Use of a fluid other than specified could result in transmission malfunction and/or failure.

PRE-DELIVERY SERVICE—ECONOLINE SCHOOL BUS (Continued)

If necessary, add enough fluid through the filler tube to raise the level to the correct position. Do not overfill the transmission, because it will result in foaming, loss of fluid through the vent, and possible transmission malfunction. If overfill occurs, excess must be removed.

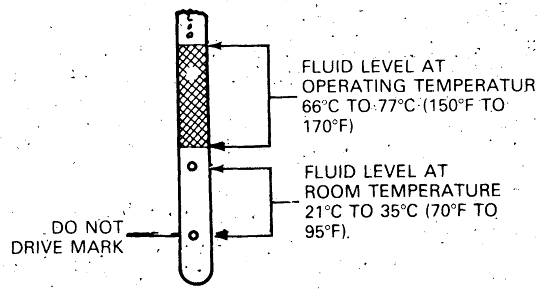
5. Install the dipstick, making sure it is fully seated in the tube.

If the transmission fluid level is correctly established at 21° to 35°C (70° to 95°F), it will appear in the cross hatch area on the dipstick when the transmission reaches an operating temperature of 66° to 77°C (150° to 170°F). Do not overfill or underfill.

Overfill can cause the fluid to foam and spill out through the transmission vent resulting in a transmission malfunction.

Underfill can result in transmission loss of engagement or slipping. This condition is most evident in cold weather or when the vehicle is parked or being driven on a hill.

If the transmission fluid level is checked when the fluid is at room temperature, the dipstick could indicate that fluid should be added if the dipstick is misread. If fluid is added at this time, an overfill condition could result when the fluid reaches operating temperatures of 66° to 77°C (150° to 170°F) (dipstick hot to touch).


FLUID LEVEL AT OPERATING TEMPERATURE 66°C TO 77°C (150°F TO 170°F)
FLUID LEVEL AT ROOM TEMPERATURE 21°C TO 35°C (70°F TO 95°F).
DO NOT DRIVE MARK

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Check Lines, Fittings, Connections and Components for Leaks

Check all lines, fittings, connections and components for leaks and repair, as required.

Check Cooling System for Leaks

Check for leaking heater and radiator hoses.

Make sure all supporting brackets for hoses are in place and that the hoses are properly installed in the supports.

BODY OPERATIONS

Check Hood Alignment and Lock Operation

Check hood alignment and, if required, align the hood as described in Section 44-21, Hood and Hinges. Check for correct operation of all locks and repair as required.

Check Headlamp Aim

Check headlamp aim and adjust as required. Refer to Section 32-03, Headlamp System.

Check Operation of Door Latches

Be sure all doors close securely without being slammed. Check key operation in all locks.

Check Seat Belts for Proper Installation and Operation

Check that each seat belt is properly installed. If the seat belt attachment is hidden or covered, pull on the seat belt to determine that it is anchored to the vehicle.

Check Operation of Seats

Check the seats for proper operation. Be sure the latches operate properly and retain the seats.

CHASSIS OPERATIONS

Check and Top Up Fluid Levels in Manual Transmission

Clean dirt and grease from the area around the filler plug and remove the filler plug from the side of the case.

If lubricant does not flow from the filler plug hole, fill the case even with the bottom of the filler hole with Standard Transmission Lubricant (SAE 80W), D8DZ-19C547-A (ESP-M2C83-C) or equivalent.

Check Axle Lube Level

Check the rear axle lube level and fill as required. Refer to Section 15-01, General Driving Axle and Driveshaft Service.

Check Lines, Fittings, Connections and Components on Underside for Proper Assembly and Leaks

Check lines, fittings, connections and components on underside for proper assembly and leaks. Repair as required.

Check Front Wheel Bearing Adjustment

Check the front wheel bearing adjustment. Refer to Section 11-10, Wheels, Hubs and Bearings—Front (Except Front Drive).

Check Manual Steering Gear Housing Lubricant

Check the manual steering gear housing lubricant and fill with the specified lubricant, as required.

PRE-DELIVERY SERVICE—ECONOLINE SCHOOL BUS (Continued)

Check Steering Mounting, Stop Adjustment, Linkage and Connections Including Clear Vision

Check the steering gear attaching bolts to be sure they are tightened.

Check the linkage for tightness and proper installation of cotter pins.

Check the intermediate shaft for tightness of pot joint bolt and nut tightness of flex coupling nuts.

After the toe had been checked and/or adjusted, the steering wheel clear vision should be checked. If the wheel is 15 degrees off center in either direction, it should be removed and repositioned. When assembling the steering wheel, the attaching nut must be restaked.

Check Brake Lines and Hoses

Check the brake lines and hoses for proper assembly. Correct as required.

Check Front and Rear Spring U-Bolt Torque

Check the front and rear spring U-bolt torque. Refer to Section 14-21, Front Suspension—Twin I-Beam and Section 14-31, Rear Suspension—Leaf Springs.

Check Exhaust System for Routing and Leaks

Check for leaks, noise or groundout to adjacent components. Inspect for proper assembly of components.

Lube Rear Spring Pins and All Chassis Components

Lube the rear spring pins and all chassis components. Refer to Section 50-03, Lubrication Charts and Lubricant Specifications.

Inspect Driveline for Proper Assembly

Inspect the driveline for proper assembly. Refer to Section 15-01, General Driving Axle and Driveshaft Service and the appropriate driveshaft section in Group 15.

Torque Rear Axle Shaft Flange Bolts

Tighten the rear axle shaft flange bolts to the specified torque listed in the appropriate driveshaft section in Group 15.

Check Tires and Tire Pressures

Check the tires and tire pressures. Adjust as required. Refer to Section 11-01, General Wheel and Tire Service.

Clutch Pedal Free Play and Total Travel

Check free travel and full return of clutch pedal and disengagement of the clutch. Check for chatter, slipping, excessive pedal effort or noise.

Check Front Wheel Toe-In

Check the front wheel toe-in and adjust as required. Refer to Section 14-01, General Suspension Service.

NOTE: Assure that tags referring to TOE-IN reset be hung in the cab visible to the customer or Body Builder.

Torque Wheel Nuts to Specification

Refer to the procedure "Tighten All Wheel Lug Nuts to Specification" in the Chassis Operations portion of Pre-Delivery Light Truck, E-150, E-250, E-350, F-150, F-250, F-350 and Bronco in this Section.

ROAD TEST OPERATIONS

Check Engine Driveability (During Road Test)

During start-up acceleration, cruise and deceleration, check for unsatisfactory engine performance such as:

- Prolonged starting (cranking).
- Hard starting (does not quite catch).
- False starts (quits immediately after starting).
- Idles rough, stalls.
- Idles unusually slow.
- Stumbles, backfires, stalls or hesitates during acceleration.
- Spark knock during light-to-moderate acceleration.
- Sluggish, poor acceleration.
- Surges or lopes.
- Hissing, unusual noises or vibration under hood.
- Smokes.
- Does not shift properly (hard shifting or engaging, delays or jerks).
- Any other unsatisfactory condition observed by technician.

Necessary repairs may be claimed under provisions of the warranty.

PRE-DELIVERY SERVICE—ECONOLINE SCHOOL BUS (Continued)

Check Neutral Start Switch Operation, (Automatic Transmission)

Engine should start with shift lever in NEUTRAL and/or PARK positions only. If this is not the case, verify that the manual linkage adjustment is to specification and readjust as required in "D" (DRIVE) position for C6 or Ⓓ (OVERDRIVE) position for AOD. If condition persists for C6 transmissions, adjust the neutral start switch in the neutral position. Refer to the Maintenance portion of Section 50-17, Automatic Transmission, for the neutral start switch adjustment procedure. AOD neutral start switch is not adjustable.

Check Operation of All Lights, Turn Signals, Hazard Warning Flashers, and Gauges

Check switches and brightness of lamps, including operation of oil pressure and alternator warning lamps. Check detent action and return of turn signal lever by making full left and full right turns during road test.

Check to be sure horn(s) blow at all contact positions.

Check for proper operation, including wiper sweep and park.

Verify that gauges operate and needles do not bounce.

Check Steering Column Lock

Place transmission selector lever in PARK position on vehicles equipped with column shift automatic transmission; place in any position if equipped with manual transmission. Turn key to LOCK position. Floor shift models are equipped with lock button on the left side of steering column, which must be depressed first.

Turn the steering wheel left or right slightly, until it snaps into the lock detent.

Check to see if the steering wheel is locked in both directions. The selector lever will remain locked in PARK position on the column-shift vehicles only. The key can be removed from the ignition lock in LOCK position only.

Check Parking Brake Operation

Check parking brake operation. If required, adjust the parking brake as described in Section 50-12, Brakes.

Check Horn, Windshield Wipers and Washers

Horns

Check to be sure horn(s) blow at all contact positions.

Windshield Wiper and Washer

Check for proper operation, including wiper sweep and park.

Check Brake, Clutch and Accelerator Pedal

Check brake, clutch and accelerator pedal operation. Repair as required.

Check Transmission Shift Operation

Selector Linkage

Six detent positions should be felt as the lever moves through its positions on the C6 and Automatic Overdrive Transmissions.

If equipped with manual transmission, check for smooth shift through all gears.

Check Transmission Initial Engagement (C6 and AOD Transmissions)

Initial engagement checks are made to determine if initial band and clutch engagements are smooth.

Run the engine until its normal operating temperature is reached. With the engine at the correct idle speed, shift the transmission selector from N to 2, D1 and R.

Observe the initial band and clutch engagements. Band and clutch engagements should be smooth in all positions.

Check Shift Points

Check the minimum throttle upshifts in D (Drive). The transmission should start in first gear, shift to second and then shift to third (or finally shift to fourth on AOD equipped vehicles) within the shift points specified in the Service Specifications Manual.

With the transmission in third gear, depress the accelerator pedal through the detent (to the floor). The transmission should shift from third to second or third to first, depending on the transmission type and vehicle speed.

Transfer Case

Be sure case shifts properly from one range to another. Check 4-wheel drive engagement and disengagement.

Shift Timing and Quality

Both upshifts and downshifts should be smooth and correctly timed. Adjust, if necessary.

Check Steering Control

Road test the vehicle, and check for harshness, noise, wander or free play. Check steering wheel return for stiffness or inconsistency in either direction. Correct as required.

Check for Squeaks and Rattles

Throughout the road test and especially on rough roads, listen for squeaks or rattles.

Listen for anything loose and for objectionable wind noise or vibration.

PRE-DELIVERY SERVICE—ECONOLINE SCHOOL BUS (Continued)

Check All Instruments for Proper Operation

During road test, test the operation of all instruments and gauges and verify proper operation. Repair as required.

Check Operation of Heater, Air Conditioner, Defroster, Ventilation System, Radio, Seat Belt Warning System and All Other Optional Equipment

Heater, Defroster

Place selector lever in HEAT position. Move blower switch through each speed position and check for corresponding change in air discharge at outlets. Move temperature control lever through entire range and check for proper change in discharge air temperature. Repeat this procedure in DEFROST position and check for air discharge through defroster nozzles.

Air Conditioner

Place function selector lever in A/C and the temperature selector in COOL. Increase engine speed to approximately 1500 rpm. After approximately one minute, check the sightglass. A continuous or large amount of bubbles during compressor operation indicates a refrigerant undercharge. If an undercharge is found, check and repair any leaks, evacuate the system, and charge with the proper amount of refrigerant R-12. If the sightglass is clear, a cold suction tube at the compressor indicates that the system is working properly. After approximately one minute, check for cool air discharge at each A/C register in each blower speed position. Also, check register(s) for direction and volume control. Check temperature modulation by moving control lever slowly to WARM position. Return lever to COOL position.

Fresh Air Vents

Check all vents (if so equipped) by operating vent controls.

Check Radio Operation

Check radio and type player (if so equipped) for proper operation and repair as required. Set pushbuttons for local stations.

Seat and Shoulder Belts

Check seat belt warning system for proper operation. Check automatic retractors for full extension, retraction and retention of belt. Check buckle and clasp for proper retention, release, and length adjustment.

Check for Belt Noise

Check for belt noise. Check for specified belt tension. Refer to the Adjustments portion of Section 27-06, Accessory Drive Belt Service.

APPEARANCE OPERATIONS

Wash and Perform Detailed Cleanup of Interior and Exterior

Remove all shipping covers from vehicle. Remove the windshield markings and tapes. Wash the vehicle and check for leaks. Inspect metal and paint condition and touch up chips and scratches. Check for excess sealer.

CAUTION: Do not use steel wool, abrasive type cleaners, or strong detergents containing highly alkaline or caustic agents on chrome plated materials, aluminum wheels, or anodized aluminum parts because the protective coating may be damaged and cause discoloration or paint deterioration.

Touch Up Minor Paint Blemishes—Brush, Aerosol Can and/or Spot Polish

Check for any imperfections in paint and metal finish.

Correct minor chips and scratches with brush or spray can touch-up paint and polish out any surface blemishes.

Check for Necessary Owner Information Material in Glove Box

Check glove compartment for:

- Warranty Facts Booklet
- Owner Card
- Owner Guide
- Consumer Information Folder

PRE-DELIVERY SERVICE RECORDS—MEDIUM/HEAVY TRUCKS

F-, B-, C- 600 THROUGH 8000 SERIES (EXCEPT SCHOOL BUS CHASSIS, CL AND L-SERIES AND CARGO)

F-B-C 600-8000 SERIES TRUCKS (EXCEPT BUS)

Check/Inspect the Vehicle as Shown: Perform Specified Adjustments When Required.

UNDERHOOD OPERATIONS

- ☐ Cooling system fluid level — check and top up as required.
- ☐ Throttle operation and idle return — check and adjust.
- ☐ Engine idle speeds — check and adjust or perform warranty to correct.
- ☐ Engine air intake and breather cap installation — check for alignment and/or damage.
- ☐ Engine oil level — check and top up as required.
- ☐ Clutch and brake master cylinder fluid level — check and top up as required.
- ☐ Transmission fluid/lube level — check and top up as required.
- ☐ Power steering fluid level (hot) — check and top up as required.
- ☐ Windshield washer reservoir fluid — top up.
- ☐ Batteries — check for 12.45 open circuit voltage and recharge if necessary.

BODY OPERATIONS

- ☐ Install loose items such as antenna(s), and exhaust/air cleaner stacks.
- ☐ Doors — check operation of latches.
- ☐ Seatbacks — check operation of latches.

CHASSIS OPERATIONS

- ☐ Shock absorber shipping spacer — remove from cab (air suspended cabs only).
- ☐ Axles(s), lube level — check and top up as required.
- ☐ Manual steering gear lube level — check and top up as required.
- ☐ Engine & transmission mount fasteners — visually check for loose fasteners.
- ☐ Lines, hoses, fittings, connections and components — check visually for liquid leaks; check for audible leaks in air brake system.
- ☐ Automatic transmission pre-delivery operations — perform in accordance with manufacturer's instructions.
- ☐ Check hydraulic parking brake master cylinder reservoir and fill as required.
- ☐ Front wheel toe-in — check and adjust.
- ☐ Wheel nuts — torque to specifications.
- ☐ Tire pressures — adjust to specifications.
- ☐ Exhaust system including extension and rain cap — visually check for proper installation, damage and loose fasteners.
- ☐ Steering linkage — visually check for damage and loose fasteners.

CHASSIS OPERATIONS (Cont'd)

- ☐ Suspension — visually check for damage and loose fasteners.
- ☐ Fluid, air lines, electrical harnesses and connectors — visually check for damage and loose fasteners and connectors.
- ☐ Front and rear U-bolts — adjust torque to specifications.
- ☐ Rear axle shaft flange nuts — torque on saddle-mounted deliveries.
- ☐ Rear brake adjustment — set to specification on saddle-mounted deliveries.
- ☐ Tandem suspension (all except Neway and Hendrickson walking beam) — check alignment.

ROAD TEST OPERATIONS

- ☐ Engine driveability during road test (including fast idle return to curb idle during warm-up) — check.
- ☐ All instruments — check for proper operation.
- ☐ All warning devices — check for proper operation.
- ☐ All lights — check for proper operation.
- ☐ Turn signals and hazard warning flashers — check for proper operation.
- ☐ Parking brake — check operation.
- ☐ Service brake — check operation.
- ☐ Check manual transmission, shift and clutch operation.
- ☐ Steering control — check.
- ☐ Hand throttle — check operation.
- ☐ Accelerator pedal — check operation.
- ☐ 2-speed axle — check operation.
- ☐ Horn — check operation.
- ☐ Windshield wipers and washers — check operation.
- ☐ Heater/defroster/air conditioner/ventilation system — check operation.
- ☐ Radio system — check operation.
- ☐ All optional equipment — check operation.
- ☐ Check for squeaks and rattles — tighten obvious loose fasteners.
- ☐ Driveability — check for emission compliance requirements.

APPEARANCE OPERATIONS

- ☐ Wash and perform detailed clean-up of interior and exterior.
- ☐ Touch up minor paint blemishes.
- ☐ Owner information — check in cab for folder and contents.
- ☐ Remove protective covers from seat, carpet and other areas.

CY3122-2A

PRE-DELIVERY SERVICE RECORD—SCHOOL BUS CHASSIS

B- 600-700 AND 7000 SERIES

SCHOOL BUS CHASSIS — B-600-700 AND 7000 SERIES

Check/Inspect the Vehicle as Shown: Perform Specified Adjustments When Required.

UNDERHOOD OPERATIONS

- ☐ Check radiator coolant level and top up as required.
- ☐ Check carburetor linkage and choke control — adjust as required or perform warranty repair.
- ☐ Check and adjust drive belt tension.
- ☐ Check and set initial ignition timing — using oscilloscope and/or meter.
- ☐ Check carburetor idle speed adjustments — adjust if necessary.
- ☐ Check engine level — fill as required.
- ☐ Check steering gear housing lubricant and fill as required.
- ☐ Check brake master cylinder fluid level — fill as required.
- ☐ Check windshield washer reservoir fluid level — fill as required.
- ☐ Check battery for 12.45 open circuit voltage, recharge if necessary.
- ☐ Check battery cables for tightness and proper assembly — correct as necessary.
- ☐ Check electrical connections and routing.
- ☐ Check brake lines and hoses for proper assembly — correct as required.
- ☐ Check power steering lines for proper routing and leaks and correct as necessary.
- ☐ Check oil bath air cleaner fluid level — fill as required.
- ☐ Check power steering reservoir fluid level and fill as required.
- ☐ Check automatic transmission fluid level — fill as required.
- ☐ Check lines, fittings, connections and components for leaks including air brake system.
- ☐ Check cooling system for leaks.
- ☐ Check hydraulic parking brake reservoir and fill as required.

BODY OPERATIONS

- ☐ Check hood alignment and lock operation.
- ☐ Remove and discard cowl braces.
- ☐ Install new gaskets supplied with vehicles (saddle mounted) and torque rear axle flange retaining nuts.
- ☐ Check headlamp aim and adjust as required.
- ☐ Torque rear axle shaft flange nuts (on non-saddle mounted units).
- ☐ Check low air pressure or vacuum buzzer gauge and operation.
- ☐ Check and adjust clutch pedal free play and total travel.
- ☐ Check operation of all lights, turn signals, hazard warning flashers and gauges.
- ☐ Perform air system leakdown check.

CHASSIS OPERATIONS

- ☐ Check manual transmission fluid level — fill as required.
- ☐ Check axle and lube level — fill as required.
- ☐ Check lines, fittings, connections and components on underside for proper assembly and leaks (including air brake system).
- ☐ Check front wheel bearing adjustment.
- ☐ Check steering mounting, stop adjustment, linkage and connections including clear vision.
- ☐ Check front and rear spring U-bolt torque.
- ☐ Drain air brake reservoir.
- ☐ Check exhaust system for routing and leaks.
- ☐ Adjust rear brakes on saddle-mount deliveries.
- ☐ Lube rear spring pins and all chassis components.
- ☐ Inspect driveline for proper assembly.
- ☐ Check tires and tire pressures — adjust pressures as required.
- ☐ Inspect fuel tank mounting brackets and straps (50 gallon and up) — tighten as required.
- ☐ Check front wheel toe-in and adjust as required.
- ☐ Torque wheel nuts to specification.
- ☐ Check and correct runout (cast spoke wheels).

ROAD TEST OPERATIONS

- ☐ Check engine driveability during road test (including fast idle return to curb idle during warm-up).
- ☐ Check for neutral start switch operation (automatic transmission).
- ☐ Check parking brake operation.
- ☐ Check horn, windshield wipers and washer operation.
- ☐ Check brake, clutch and accelerator pedal operation.
- ☐ Check transmission shift operation.
- ☐ Check 2-speed axle control operation.
- ☐ Check engine performance — see emission compliance requirements.
- ☐ Check steering control.
- ☐ Check squeaks and rattles.
- ☐ Check all instruments for proper operation.
- ☐ Check radio operation (if so equipped).
- ☐ Check for fluid leaks — correct as necessary after road test.

APPEARANCE OPERATIONS

- ☐ Inspect for interior metal and paint damage and touch up as required (chassis only).
- ☐ Check glove compartment for warranty facts booklet, ownercard and owner publications.

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PRE-DELIVERY SERVICE—MEDIUM/HEAVY TRUCK—600 THROUGH 8000 SERIES

Underhood Operations

Check Radiator Coolant Level

With the engine cold (at ambient temperature), check crossflow radiators (horizontal tubes) to see that coolant level is 0 to 1.5 inches below the pressure cap seat in the radiator filler neck.

On cooling systems equipped with a coolant recovery system, it is not necessary to have coolant in the overflow reservoir.

CAUTION: Do not operate engine if coolant level is below sightglass.

Gasoline Engines

Check Throttle Operation and Idle Return

Inspect the throttle linkage for proper installation. Remove the air cleaner and, with the accelerator fully depressed, observe the position of the carburetor throttle plate(s). They should be vertical (wide-open position).

Check accelerator for sticking or binding, full return and sufficient height to fully open throttle.

Check Choke Linkage for Freedom of Movement

Physically check all choke linkages for freedom of operation.

Engine Idle Speeds—Check and Adjust

Refer to the Engine/Emissions Diagnosis Manual for engine idle speed adjustment procedures.

Check and Adjust Engine Timing

Refer to the Engine/Emissions Diagnosis Manual for engine timing check and adjustment procedures.

Check Engine Driveability (During Road Test)

During start-up, acceleration, cruise and deceleration, check for unsatisfactory engine performance such as:

- Prolonged starting (cranking).
- Hard starting (does not quite catch).
- False starts (quits immediately after starting).
- Idles rough, stalls.
- Idles unusually slow.
- Idles unusually fast (races, pulls).
- Stumbles, backfires, stalls or hesitates during acceleration.
- Spark knock during light-to-moderate acceleration.
- Sluggish, poor acceleration.
- Surges or lopes.
- Hissing, unusual noises or vibration under hood.
- Smokes.
- Does not shift properly (hard shifting or engaging, delays or jerks).
- Any other unsatisfactory condition observed by mechanic.

Necessary repairs may be claimed under provisions of the warranty.

Check Engine Air Intake and Breather Cap Installation

Inspect for alignment and/or damage. Correct as necessary.

Diesel Engines

Check Throttle Operation and Idle Return

Inspect the throttle linkage for proper installation. Remove the air cleaner and check accelerator for sticking or binding, full return, and sufficient travel to fully open throttle.

Check Electrical and Vacuum Components for Proper Connections

Visually check vacuum and electrical connections to insure system integrity.

Engine Idle Speeds—Check and Adjust

Refer to the Engine/Emissions Diagnosis Manual for idle speed adjustment procedures.

Check Engine Air Intake

Inspect for alignment and/or damage. Correct as necessary.

Check and Adjust Drive Belt Tension (B-Series only)

NOTE: Due to space limitations, it may be necessary to remove components to gain access for inspecting, checking, or replacing accessory drive belts.

NOTE: ON DUAL BELT ACCESSORY DRIVE, THE BELTS MUST BE REPLACED IN MATCHED SETS.

Bring the engine to normal operating temperature and turn the engine off. Using the Rotunda belt tension gauge (Models 021-00019 and 021-00021) or equivalent, check the tension of all drive belts; on dual drive belts, check only one belt. Compare measured tension to specification. (Refer to the appropriate Section in the Truck Shop Manual.)

PRE-DELIVERY SERVICE—MEDIUM/HEAVY TRUCK—600 THROUGH 8000 SERIES (Continued)

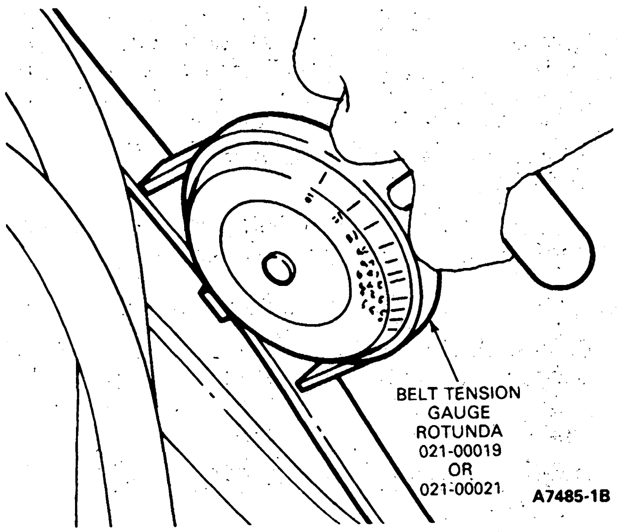
NOTE: A belt tension gauge offers the most accurate means of checking belt tension. Accordingly, a belt tension gauge should be used whenever possible; removal of fan shroud, air induction hardware, etc., may be necessary. If space limitations, however, make it absolutely impossible to use a tension gauge, the following procedure may be substituted:

a. **Press firmly on the belt (approximately at the middle of the free span between pulleys).**

b. **Belt deflection should be as follows:**

—For all belts with a free span less than 12 in., deflection should be between 1/8 in. and 1/4 in.

—For all belts with a free span greater than 12 in., deflection should be between 1/8 in. and 3/8 in.



Check Engine Oil Level—Gasoline Engines

On all engines, the oil level should be between the upper "**SAFE**" marking and "**MAX**" marking on the dipstick. Add oil as required.

Check Engine Oil Level—Diesel Engines

Wait a few minutes to let the engine oil stabilize in oil pan sump. The normal oil level should be between 0.25 inch below the "FULL" mark to 0.10 inch above the "FULL" mark. Add oil if required.

Steering Gear Housing Lubricant Level Check

Check steering gear lubricant and fill as required (B-series only).

Check Brake Master Cylinder Fluid Level

Push the master cylinder cap retainer to one side and remove the filler cap from the master cylinder. The gasket that seals the master cylinder should come off with the cap. Fill both reservoirs full or 1/4 inch from the top. Install the filler cap, making sure the gasket is properly seated in the cap. Use DOT 3 (FMVSS 116) brake fluid, Heavy Duty Brake Fluid, C6AZ-19542-A (ESA-M6C25-A) or equivalent.

Vehicles With Hydro-Max Booster

CHECK FLUID LEVEL—HYDRO-MAX PUMP with engine off, remove cap from Hydro-Max pump and wipe dipstick clean. Reinstall cap and remove again to check fluid level on dipstick.

Cold Oil Check

With fluid at touchable temperatures (20°-49°C [68°-120°F]), check if level is at "cold" full line on dipstick. Add power steering fluid to "cold" full line, if level checked is below the line.

Hot Oil Check

With fluid at normal operating temperatures, (80°-110°C [176°-230°F]), check if level is at "hot" full line on dipstick. Add power steering fluid to "hot" full line, if level checked is below the line.

Check Hydraulic Clutch Master Cylinder Fluid Level

The clutch master cylinder reservoir should be filled to within 1/2 inch from the top. Use only the specified fluid (Section 50-03, Lubricant and Lubrication Charts).

Check Automatic Transmission Fluid Level (Allison at 545, MT-643 and MT-653 Transmissions)

With the truck standing level and the parking brake applied, start the engine and move the transmission shift lever through all the shift positions, allowing sufficient time in each range to engage the transmission, stopping at neutral position. The engine should be running at idle and the transmission and engine at operating temperature. Do not turn the engine off during the fluid level check.

PRE-DELIVERY SERVICE—MEDIUM/HEAVY TRUCK—600 THROUGH 8000 SERIES (Continued)

1. Clean all dirt from the transmission fluid dipstick cap before removing the dipstick from the filler tube.
2. Pull the dipstick out of the tube, wipe it clean, and push it back into the tube. Be sure it is fully seated.
3. Note: The dipstick has two (2) hot marks and two (2) cold marks between the ADD and FULL marks.
4. **Hot Oil Check**

   With engine idling and transmission at normal temperature (71°-93°C [160°-200°F]) pull the dipstick out and check fluid level. The level should be between the two top "HOT" marks.

   If additional fluid is required, add enough fluid through the filler tube to bring the level between the ADD and FULL marks on the dipstick. Do not overfill the transmission, as foaming and loss of fluid through the vent may result in transmission malfunction.
5. **Cold Oil Check**

   Engine idling and transmission cool to touch (16°-49°C [60°-120°F]). Pull the dipstick out and check the fluid level. The fluid level should be between the two bottom (cold) marks. If additional fluid is required, add oil to bring the oil level to the middle of the "COLD" marks.
6. Replace the dipstick in the tube, making sure it is fully seated.

Check Manual Transmission Fluid Level

Clean dirt and grease from the area around the filler plug and remove the filler plug from the side of the case. If lubricant does not flow from the filler hole, fill the case to the top of the filler hole with the specified lubricant. Install the filler plug.

Check Power Steering Pump Reservoir Fluid Level

With engine off, remove cap from power steering reservoir and wipe dipstick clean. Reinstall cap and remove again to check fluid level on dipstick.

Cold Oil Check

With power steering fluid at touchable temperature (20°-49°C [68°-120°F]), check "cold" side of dipstick. Fluid level should be at or between the "Add" line and the "Full" line. If level indicated is below the "Add" line, add fluid to proper range.

Hot Oil Check

With power steering fluid at normal operating temperatures (80°-110°C [176°-230°F]), check "hot" side of dipstick. Fluid level should be at or between the "Add" line and the "Full" line. If level indicated is below the "Add" line, add fluid to proper range.

Check Windshield Washer Reservoir Level

Add fluid as necessary.

Check Battery Charge

Check Battery Charge—Non-Maintenance Free Battery

With battery temperature at 27°C (80°F) the battery should have a specific gravity reading of not less than 1.230. If the battery requires charging, refer to Specifications in Section 31-02, Batteries for battery charging rates.

Maintenance Free Battery

With the engine off, turn headlamps on for 10 seconds and wait for five minutes to stabilize the battery. Place voltmeter leads on the battery terminals and check for open circuit voltage. The minimum open circuit voltage is 12.45. If the battery is below 12.45 open circuit voltage, recharge according to the allowable battery charge time schedule for maintenance free batteries. Refer to Specifications in Section 31-02, Batteries for battery charge time schedule. Do not exceed a 30 amp charge rate. If gassing or spewing of the electrolyte occurs during charging, the charge rate must be reduced.

Check Battery Cables for Tightness and Proper Assembly (B-Series Only)

Check battery cable connections for tightness. Battery cables must be tight in terminals and terminals tight to posts after installation. A light coating of non-metallic grease can be applied to terminals and posts to retard corrosion and oxidation. Correct as necessary.

Check Electrical Connections and Routing (B-Series Only)

All visible electrical parts should be visually inspected to assure that they are properly seated. If unit is equipped with optional side mounted battery(s), the cables should be inspected to assure that they do not touch the exhaust or rub frame rails or other vehicle components.

Hydraulic Brake System Hoses and Lines

Check lines and hoses for fluid leaks, damage, kinks and interference with adjacent moving or frictional components. Check brake booster and master cylinder for vacuum and fluid leaks.

Air Brake System

Check for evidence of leakage at all fittings. Inspect lines for kinks and interference with adjacent moving or frictional components. Make sure there is as much clearance as possible between air brake and exhaust systems.

PRE-DELIVERY SERVICE—MEDIUM/HEAVY TRUCK—600 THROUGH 8000 SERIES (Continued)

Air Brake System Leak Tests

With engine stopped and reservoir charged to governor cutout pressure of 115 to 125 psi, the rate of pressure drop should not exceed 2 psi per minute with the service brakes released and spring (parking) brakes applied; or 3 psi per minute after the initial pressure drop with service brakes fully applied and spring (parking) brakes applied.

Check Oil Bath Air Cleaner Fluid Level

Remove the reservoir from the air cleaner body. Fill the reservoir to the level mark, if necessary, with the specified oil. Do not over-fill the reservoir.

Fluid Lines, Air Lines, and Electrical Harness

Check lines, fittings, connections and components on underside for proper assembly and leaks (including air brake system). Visually inspect electrical harness routings and connectors. Inspect for loose connections and loose fasteners. After road test, check for fluid leaks.

Check Fuel Lines for Leaks, Damage, and Proper Positioning

Check lines and hoses for leaks, damage, kinks or interference with adjacent moving or frictional components. Make sure the lines are properly installed in the routing clamps.

Cooling System, Hoses and Lines

Check for leaking heater and radiator hoses.

Make sure all supporting brackets for hoses are in place and that the hoses are properly installed in the supports.

Fluid Level Check—Parking Brake System

Check the fluid level in the engine driven brake pump reservoir with the parking brakes applied. If required, fill the reservoir to the specified level with Ford Automatic Transmission Fluid, ESP-M2C138-CJ, DEXRON®-II, or equivalent.

NOTE—To minimize parking brake system release and actuation during continuous cold weather operation (constant operation below 0°F), fill the parking brake system with Esso UNIVIS N-22 hydraulic oil or equivalent. DO NOT MIX WITH OTHER FLUIDS.

BODY OPERATIONS

Install Exhaust/Air Cleaner Stacks

Install the exhaust/air cleaner stacks and check for proper installation.

Install Cigar Lighter

Install cigar lighter(s).

Install Radio Antenna

Check type and location specified, and install, using installation instructions and template supplied.

Doors, Hood, Latches, Locks and Keys

Doors

Be sure all doors close securely without being slammed.

Hood

Be sure the hood is in alignment and opens freely and closes securely.

Locks and Keys

Be sure all keys fit and operate lock cylinders.

Windows and Vents

Be sure all windows and vents open and close securely. Adjust as required.

Seatbacks—Check Operation of Latches

Be sure latches operate properly and secure seatbacks. Be sure the seat slides properly on its tracks. Adjust as required.

Torque Rear Axle Shaft Flange Nuts on Saddle Mounted Deliveries (ALL)

Install New Gaskets on Saddle Mounted Vehicle (if Required, and Torque Rear Axle Flange on B-Series)

Be sure nuts are tightened to the specified torque. Use an alternating sequence for even tightening.

Check Headlamp Aim and Adjust as Required (B-SERIES ONLY)

Check the headlamps for proper alignment. If necessary, align the headlamps using the Headlamp Aiming Kit—Rotunda Model 107-00001 or equivalent. Be sure to use the latest manufacturer's instructions.

Air Pressure Buzzer and Gauge Operation (B-Series Only)

Operate brakes to drop pressure below 40 psi. With engine running, buzzer should sound and continue sounding until pressure builds to 58-65 psi.

Clutch

Check free travel and full return of clutch pedal and disengagement of the clutch. Check for chatter, slipping, excessive pedal effort or noise. Adjust, if required, as outlined in Maintenance.

Check Operation of All Lamps, Turn Signals, Hazard Warning Flashers and Gauges

Lamps and Signals

Check switches and brightness of lamps, including operation of oil pressure and alternator warning lamps. Check detent action and return of turn signal lever by making full left and full right turns during road test.

PRE-DELIVERY SERVICE—MEDIUM/HEAVY TRUCK—600 THROUGH 8000 SERIES (Continued)

Speedometer, Odometer and Tachometer

Verify that gauges operate and needles do not bounce.

Alternator and Voltage Regulator

Turn headlamps on and check the charge indicator gauge or lamp to be sure charging system is not discharging.

Perform Air System Leakdown Check—Service Brakes (Spring Brakes in Released Position)—B-Series Only

With engine stopped and reservoirs charged to governor cutout pressure (120-125 psi) the rate of drop should not exceed one psi per minute.

With engine stopped and reservoirs charged to governor cutout pressure (120-125 psi) the rate of drop should not exceed two psi per minute with brakes fully applied.

CHASSIS OPERATIONS

Shock Absorber Shipping Spacer

Remove and discard the shock absorber shipping spacer from all air suspended cabs.

Check Manual Transmission Fluid Level

Clean dirt and grease from the area around the filler plug and remove the filler plug from the side of the case. If lubricant does not flow from the filler hole, fill the case to the top of the filler hole with the specified lubricant. Install the filler plug.

Axle Lubricant Level

Clean dirt and grease from the area around the filler plug, and check level. When checking, the axle must be in normal curb position.

Manual Steering Gear Lube Level

Check manual steering gear lube level and correct as required.

Transmission and Engine Mounts

Visually inspect engine and transmission fasteners; tighten as required. Refer to Medium/Heavy Truck Shop Manual Section 16-10, General Manual Transmission Service.

Lines, Hoses, Fittings, Connections and Components

Check all lines, hoses, fittings, connections and components and correct as required.

Check Front Wheel Bearing Adjustment (B-Series Only)

When the wheel is off the ground, grasp tire at sides and alternately push inward and pull outward on the tire. If any looseness is felt, adjust the wheel bearing as described.

After adjusting, check front wheel rotation. If the wheel rotates freely with no noticeable end play, install the grease cap and hub cap; if loose or rough, inspect cones, rollers and cups and replace or repack as necessary.

Check Hydraulic Parking Brake Master Cylinder

Check hydraulic parking brake master cylinder and top-up as required.

Check Steering Mounting, Stop Adjustment, Linkage and Connections Including Clear Vision (B-Series Only)

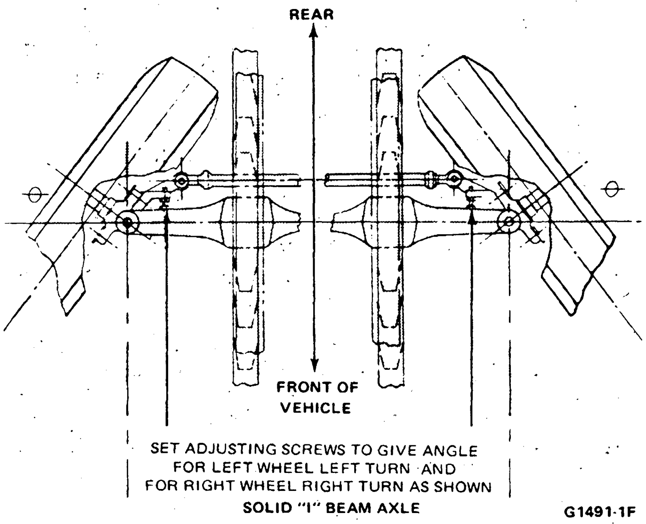
Steering Mountings, Linkage and Connections

Check the steering gear attaching bolts to be sure they are tightened to specifications. Tighten the attaching bolts to specifications, if necessary.

Check the linkage for tightness and proper installation of cotter pins. Correct as required.

Steering Stop Adjustments (B-Series Only)

The following illustration shows the position of the front wheels when checking the stop adjustment angles.


REAR
FRONT OF VEHICLE
SET ADJUSTING SCREWS TO GIVE ANGLE FOR LEFT WHEEL LEFT TURN AND FOR RIGHT WHEEL RIGHT TURN AS SHOWN
SOLID "I" BEAM AXLE
G1491-1F

Check Torque on Front and Rear U-Bolts

Refer to Specifications for correct torque limits.

PRE-DELIVERY SERVICE—MEDIUM/HEAVY TRUCK—600 THROUGH 8000 SERIES (Continued)

Drain Air Brake Reservoir (B-Series Only)

On units with drain cocks, the valve should be opened to check reservoir drain. On units with automatic moisture ejectors, the reservoir drain should be checked by depressing the valve stem in the center of the ejector.

Exhaust System—Including Extension and Rain Cap

Check for noise or ground-out to adjacent components.

Inspect for proper assembly and components.

Adjust Rear Brakes (Saddle Mounted Deliveries)

Adjust rear brakes to specifications.

Lube Rear Spring Pins and All Chassis Components (B-Series Only)

Refer to Specifications in Section 50-03, Lubrication Charts and Lubricant Specifications for lubrication information.

Check Steering Gear, Steering Intermediate Shaft and Flex Coupling, Steering Linkage and Suspension for Damage or Loose Fasteners

Steering

Check the steering gear attaching bolts to be sure they are tightened.

Check the linkage for tightness and proper installation of cotter pins.

Check the intermediate shaft for tightness of pot joint bolt and nut and tightness of flex coupling nuts.

Front and Rear Suspension

Inspect the front and rear suspension for proper assembly and components. Check to be sure all lock tabs are bent for nut and bolt retention and that all cotter pins are properly installed.

Inspect Driveline for Proper Assembly (B-Series Only)

Check that driveshaft guards are installed and U-joint attaching parts are secure. Also check that driveline is correctly phased. Refer to the Medium/Heavy Truck Body, Chassis and Electrical Shop Manual Section 15-60, General Driveshaft Service for correct U-joint phasing procedure.

Adjust Tire Pressures to Specification

Be sure pressure agrees with specifications for the tire and vehicle model. Refer to Section 11-01,

Fluid Lines, Airlines, Electrical Harnesses and Components

Check lines, fittings, connections and components on chassis for proper assembly and leaks (including air brake system). Visually inspect electrical harness routings and connectors. Inspect for loose connections and loose fasteners, after road test, check for fluid leaks. General Wheel and Tire Assembly.

Fluid Level Check—Parking Brake System

Check the fluid level in the engine driven brake pump reservoir with the parking brakes applied. If required, fill the reservoir to the specified level with Ford Automatic Transmission Fluid, ESP-M2C138-CJ, DEXRON®-II, or equivalent.

NOTE—To minimize parking brake system release and actuation during continuous cold weather operation (constant operation below 0°F), fill the parking brake system with Esso UNIVIS N-22 hydraulic oil or equivalent. DO NOT MIX WITH OTHER FLUIDS.

Inspect Fuel Tank Mounting Brackets and Straps (50 Gallon and Up)—Tighten as Required (B-Series Only)

Inspect the fuel tank mounting brackets and straps to be sure the fuel tanks are securely attached to the vehicle.

Check Front Wheel Toe-In and Adjust As Required

Refer to the Specifications Chart in this Section for correct toe-in settings.

If the toe-in is incorrect, loosen the clamp bolts at each end of the spindle connecting rod tube. Rotate the tube until the correct toe is obtained, and tighten to 31-42 ft-lb for 1/2-20 clamp bolts or 50-70 ft-lb for 5/8-18 clamp bolts. Recheck the toe-in to make sure that no changes occurred when the bolts were tightened.

Torque All Wheel Nuts to Specification

Wheel stud nuts and clamps should be tightened alternately and evenly to draw the wheel evenly against the hub and drum.

On dual wheels, back off the outer nut before tightening inner stud. Then tighten outer nut. Some dual wheels are alternately flared inward and outward. These surfaces must be mated when wheels are mounted.

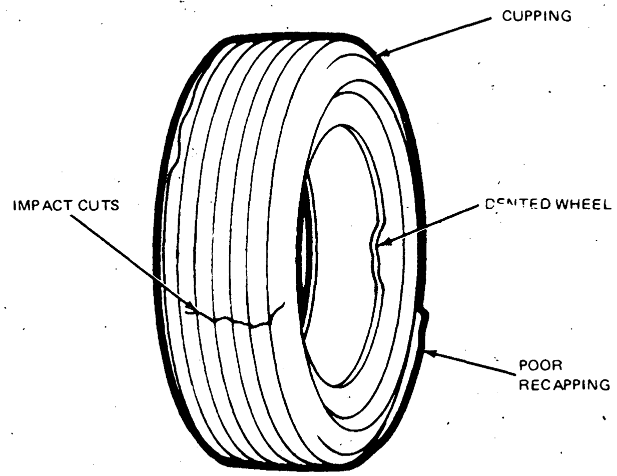
Tighten all stud nuts to recommended specification for the vehicle and wheel type.

PRE-DELIVERY SERVICE—MEDIUM/HEAVY TRUCK—600 THROUGH 8000 SERIES (Continued)

Check and Correct Runout (Cast Spoke Wheels) B-Series Only

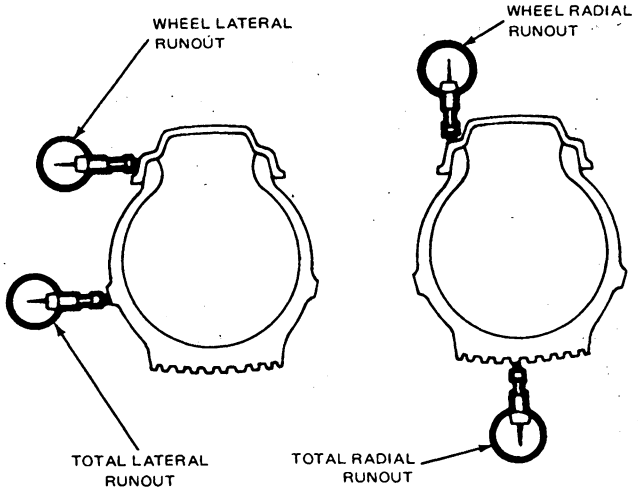
Runout can vary in two dimensions. Radial runout is the variation in trueness around the circumference around a wheel or tire. Lateral runout is the variation in trueness in a side-to-side direction.

Before checking runout, inspect the wheels and tires for bent wheels or rims. If damage is severe, replace the tire, wheel or both. Also check wheel bearing end play, which should be between 0.001 and 0.010 inch both front and rear.



A4825-1A

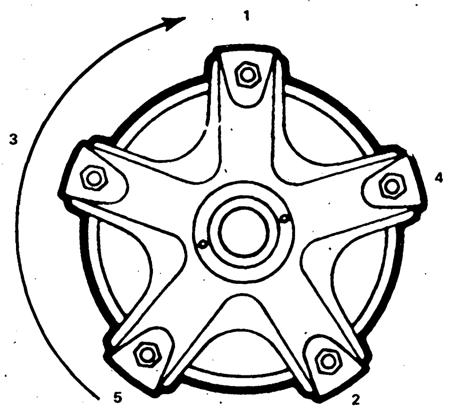
To check runout on cast wheels, first tighten the wheel nut clump nuts to torque specifications found at the end of this Section, then, using a Tire Runout Gauge (Rotunda Model 007-00014) or equivalent, check the lateral and radial runout for the rims and tires as shown below.



A4978-1A

If the lateral runout is over 0.070 inch, loosen the wheel clamp nuts and retighten them in steps as shown below to the specified torque while using the runout gauge as a guide. The nuts should be tightened in increments of 10, 50, 100, 150 and 200 ft-lbs.

If proper lateral runout still cannot be obtained, remove the wheel and clean off the rim mounting surfaces, wheel, and spider to remove dirt, rust, paint, and other foreign matter. Then remount and retighten the wheel as before.

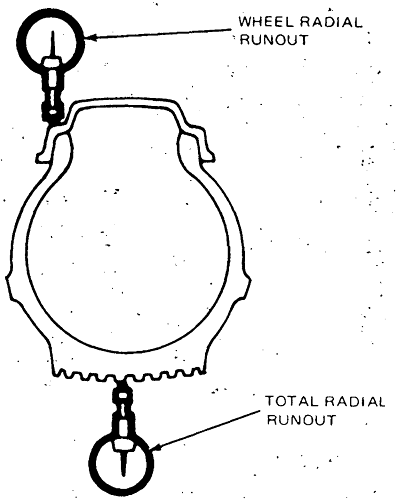


A4930-1A

Check the radial runout as shown below. If it is greater than 0.070 inch, again loosen and tighten the clamp nuts using the gauge as a guide to check both lateral and radial runout between the tightening steps. Always minimize radial runout before truing tires. If radial runout still exceeds 0.070 inch, remove and reposition the tire and rim to minimize the radial and lateral runout.

PRE-DELIVERY SERVICE—MEDIUM/HEAVY TRUCK—600 THROUGH 8000 SERIES (Continued)

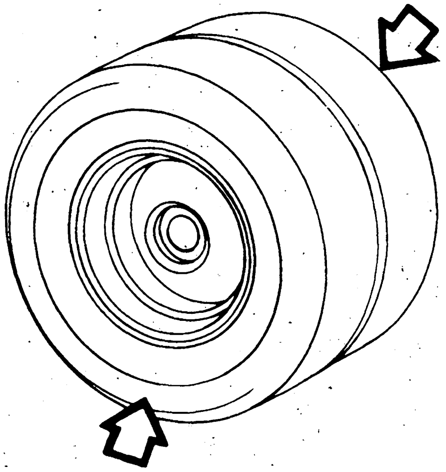
Whenever it is necessary to remove and remount the tire to minimize lateral and radial runout, be sure to use a generous amount of tire soap, so that the tire will assume a natural position on the rim. A dry mounted tire can take an unnatural seat when inflated. It is a good practice to drive the truck around the block to seat the tires.



A4831-1A

For dual tire wheel assemblies that exceed 0.070 inch radial runout at or near the same point, loosen the outer tire and rim and rotate it until the high point of the assembly is opposite the high point of the inner tire and rim assembly as shown below. Then, again check radial runout and loosen and tighten the nuts in steps, if necessary.

If the tire cannot be brought into round using the previous procedures, it will have to be trued using a special machine such as the Amermac Tire Truer or equivalent. This machine removes rubber from the tire, while it is mounted on the truck, to bring it back into round. Of course, if some badly distorted or damaged tires cannot be trued, they will have to be replaced.



A4836-1A

Rear Axle Shaft Flange Nuts (Saddle Mounted Deliveries)

Torque to specifications.

PRE-DELIVERY SERVICE—MEDIUM/HEAVY TRUCK—600 THROUGH 8000 SERIES (Continued)

Tandem Suspension (Except Hendrickson Walking Beam and Neway)—Check Alignment

Check and adjust suspension alignment according to procedures found in the appropriate Section of the Body, Chassis and Electrical Medium/Heavy Truck Shop Manual.

ROAD TEST OPERATIONS

Check Engine Driveability (During Road Test)

During start-up, acceleration, cruise and deceleration, check for unsatisfactory engine performance such as:

- Prolonged starting (cranking).
- Hard starting (does not quite catch).
- False starts (quits immediately after starting).
- Idles rough, stalls.
- Idles unusually slow.
- Idles unusually fast (races, pulls) when warm.
- Stumbles, stalls or hesitates during accelerations.
- Sluggish, poor acceleration.
- Surges or lopes.
- Excessive white smoke after 60 seconds (gasoline engine).
- Excessive black smoke (diesel engine).
- Hissing, unusual noises or vibration under hood.
- Does not shift properly (hard shifting or engaging, delays or jerks).
- Any other unsatisfactory condition observed by technician.

Necessary repairs may be claimed under provisions of the warranty.

Check Starting of Engine in Park and Neutral—(Automatic Transmission)

Engine should start with shift lever in **NEUTRAL** and/or **PARK** positions only. If this is not the case, verify that the manual linkage adjustment is to specification and readjust as required in "D" (DRIVE) position.

Check Operation of Horn, Windshield Wipers and Washers, Lamps, Signals and Instruments

Speedometer, Odometer and Tachometer

Verify that gauges operate and needles do not bounce.

Lamps and Signals

Check switches and brightness of lamps, including operation of oil pressure and alternator warning lamps. Check detent action and return of turn signal lever by making full left and full right turns during road test.

Check Brakes (Including Parking Brake and Warning Lamp)

Check foot brake pedal height before road testing. Then check and correct the following as required: Pull in either direction, harshness or noise, excessive pedal effort or spongy feel and operation of the warning lamp. Avoid sudden hard stops—make slow, gradual stops.

Check the operation of the parking brake and indicator lamp. If equipped with an indicator lamp, be sure it glows when parking brake is engaged.

Accelerator Pedal

Check accelerator pedal for proper operation.

Horns

Check to be sure horn(s) blow at all contact positions.

Windshield Wiper and Washer

Check for proper operation, including wiper sweep and park.

Check Automatic Transmission or Manual Transmission and Clutch Performance

For Medium and Heavy Trucks equipped with Allison automatic transmissions, refer to the Allison owner's manual for pre-delivery procedures.

Shift Timing and Quality

Both upshifts and downshifts should be smooth and correctly timed. Adjust, if necessary.

Check Steering Control

Road test the vehicle, and check for harshness, noise, wander or free play. Check steering wheel return for stiffness or inconsistency in either direction. Correct as required.

Hand Throttle

Check for proper operation of hand throttle.

Check Emission Control System for Loose, Missing or Damaged Components. Also Check Electrical and Vacuum Components for Proper Connections

Visually check vacuum and electrical connections to insure system integrity.

Operation of 2-Speed Axle

Operate axle control switch, and check for correct shift, engagement and operation.

Check Operation of Heater, Air Conditioner, Defroster, Ventilation System, Radio, Seat Belt Warning System and All Other Optional Equipment

Heater, Defroster

Place selector lever in HEAT position. Move blower switch through each speed position and check for corresponding change in air discharge at outlets. Move temperature control lever through entire range and check for proper change in discharge air temperature. Repeat this procedure in DEFROST position and check for air discharge through defroster nozzles.

Air Conditioner

On Medium and Heavy Trucks refer to the appropriate Section in the Body, Chassis and Electrical Section of the Medium/Heavy Truck Shop Manual.

PRE-DELIVERY SERVICE—MEDIUM/HEAVY TRUCK—600 THROUGH 8000 SERIES (Continued)

Fresh Air Vents

Check all vents (if so equipped) by operating vent controls.

Radio

Check for proper operation of radio and tape player, if so equipped. Set radio pushbuttons for local stations.

Seat and Shoulder Belts

Check seat belt warning system for proper operation. Check automatic retractors for full extension, retraction and retention of belt. Check buckle and clasp for proper retention, release, and length adjustment.

Check for Squeaks and Rattles and Belt Noise

Throughout the road test and especially on rough roads, listen for squeaks or rattles.

Listen for anything loose and for objectionable wind noise or vibration.

Check for Fluid Leaks After Road Test

Visually inspect vehicle for any leaks after road test.

APPEARANCE OPERATIONS

Wash and Perform Detailed Cleanup of Interior and Exterior

Remove all shipping covers from vehicle.

Remove the windshield markings and tapes. Wash the vehicle and check for leaks. Inspect metal and paint condition, and touch up chips and scratches. Check for excess sealer.

CAUTION: Do not use steel wool abrasive type cleaners or strong detergents containing highly alkaline or caustic agents on chrome plated materials aluminum wheels, or anodized aluminum parts because the protective coating may be damaged and cause discoloration or paint deterioration.

Check Exterior and Interior for Proper Appearance and Fit

Inspect the body exterior for door and hood gaps or evidence of rubbing or binding with adjacent panels. Check exterior moldings for adequate retention or extreme misalignment. Inspect bumpers for appearance.

Inspect interior paint for chips and scratches. Check for safe trim sealer and excess sealer.

Touch up Minor Paint Blemishes—Brush, Aerosal Can and/or Spot Polish

Check for any imperfections in paint and metal finish.

Correct minor chips and scratches with brush or spray can touch-up paint and polish out any surface blemishes.

Remove Seat and Carpet Protective Covers

Remove the plastic covers from the upholstery. See that there are no stains or dirt on the upholstery.

Remove protective covers from the carpeting and make sure there is no dirt beneath them.

Check for Necessary Owner Information Material In Glove Box

Check glove compartment for:

- Warranty Facts Booklet
- Owner Card
- Owner Guide
- Consumer Information Folder
- Other Owner Publications
- Incomplete Vehicle Booklet (if necessary)

See that the starting instructions sleeve is on the left hand visor.

PRE-DELIVERY SERVICE—MEDIUM/HEAVY TRUCK—600 THROUGH 8000 SERIES (Continued)

CL AND L-SERIES TRUCKS

Check/Inspect the Vehicle as Shown: Perform Specified Adjustments When Required.

UNDERHOOD OPERATIONS

☐ Cooling system fluid level — check and top up as required.
☐ Throttle operation and idle return — check and adjust.
☐ Engine idle speeds — check and adjust or perform warranty to correct.
☐ Engine air intake and breather cap installation — check for alignment and/or damage.
☐ Engine oil level — check and top up as required.
☐ Clutch and brake master cylinder fluid level — check and top up as required.
☐ Transmission fluid/lube level — check and top up as required.
☐ Power steering fluid level (hot) — check and top up as required.
☐ Windshield washer reservoir fluid — top up.
☐ Tilt cab lift pump (CL) — check and top up as required.
☐ Batteries — check for 12.45 open circuit voltage and recharge if necessary.

BODY OPERATIONS

☐ Install loose items such as antenna(s), and exhaust/air cleaner stacks.
☐ Doors — check operation of latches.
☐ Seatbacks — check operation of latches.

CHASSIS OPERATIONS

☐ Shock absorber shipping spacer — remove from cab (air suspended cabs only).
☐ Axles(s), lube level — check and top up as required.
☐ Manual steering gear lube level — check and top up as required.
☐ Engine & transmission mount fasteners — visually check for loose fasteners.
☐ Lines, hoses, fittings, connections and components — check visually for liquid leaks; check for audible leaks in air brake system.
☐ Automatic transmission pre-delivery operations — perform in accordance with manufacturer's instructions.
☐ Check hydraulic parking brake master cylinder reservoir and fill as required.
☐ Front wheel toe-in — check and adjust.
☐ Wheel nuts — torque to specifications.
☐ Tire pressures — adjust to specifications.
☐ Exhaust system including extension and rain cap — visually check for proper installation, damage and loose fasteners.

CHASSIS OPERATIONS (Cont'd)

☐ Steering linkage — visually check for damage and loose fasteners.
☐ Suspension — visually check for damage and loose fasteners.
☐ Fluid, air lines, electrical harnesses and connectors — visually check for damage and loose fasteners and connectors.
☐ Front and rear U-bolts — adjust torque to specifications.
☐ Rear axle shaft flange nuts — torque on saddle-mounted deliveries.
☐ Rear brake adjustment — set to specification on saddle-mounted deliveries.
☐ Tandem suspension (all except Neway and Hendrickson walking beam) — check alignment.

ROAD TEST OPERATIONS

☐ Engine driveability during road test (including fast idle return to curb idle during warm-up) — check.
☐ All instruments — check for proper operation.
☐ All warning devices — check for proper operation.
☐ All lights — check for proper operation.
☐ Turn signals and hazard warning flashers — check for proper operation.
☐ Parking brake — check operation.
☐ Service brake — check operation.
☐ Check manual transmission, shift and clutch operation.
☐ Steering control — check.
☐ Hand throttle — check operation.
☐ Accelerator pedal — check operation.
☐ 2-speed axle — check operation.
☐ Horn — check operation.
☐ Windshield wipers and washers — check operation.
☐ Heater/defroster/air conditioner/ventilation system — check operation.
☐ Radio system — check operation.
☐ All optional equipment — check operation.
☐ Check for squeaks and rattles — tighten obvious loose fasteners.
☐ Driveability — check for emission compliance requirements.

APPEARANCE OPERATIONS

☐ Wash and perform detailed clean-up of interior and exterior.
☐ Touch up minor paint blemishes.
☐ Owner information — check in cab for folder and contents.
☐ Remove protective covers from seat, carpet and other areas.

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PRE-DELIVERY SERVICE—CL AND L-SERIES TRUCKS

Underhood Operations

COOLING SYSTEM FLUID LEVEL—L-Series

With the engine cold (at ambient temperature), check crossflow radiators (horizontal tubes) to see that coolant level is 0 to 1.5 inches below the pressure cap seat in the radiator filler neck.

On cooling systems equipped with a coolant recovery system, it is not necessary to have coolant in the overflow reservoir.

On L-Series gasoline and Ford V-8 Diesel engines with crossflow radiators, fill until the coolant is visible through the sightglass (engine cold).

CAUTION: Do not operate engine if coolant level is below sightglass.

On L-Series Cummins and Detroit Diesel engines, fill until the coolant is visible through the sightglass.

COOLING SYSTEM FLUID LEVEL—CL-9000

With the engine cold (at ambient temperature), check the coolant level in the plastic reservoir located above the radiator. Maintain level at the cold fill mark on the reservoir. Install the reservoir cap.

Use the following procedure to remove air from the system and provide the proper coolant level. Place the heater temperature control at the maximum heat position. Operate the engine until the thermostat opens and the upper radiator hose becomes hot. Stop the engine and add coolant to the recovery bottle to bring the level to the "HOT" level mark.

CHECK THROTTLE OPERATION AND IDLE RETURN

Inspect the throttle linkage for proper installation. Remove the air cleaner and, with the accelerator fully depressed, observe the position of the carburetor throttle plate(s). They should be vertical (wide-open position).

Check accelerator for sticking or binding, full return and sufficient height to fully open throttle.

ENGINE IDLE SPEEDS—CHECK AND ADJUST

Refer to the Engine/Emissions Diagnosis Manual, or the engine manufacturers recommendations, for engine idle speed adjustment procedures.

CHECK ENGINE AIR INTAKE AND BREATHER CAP INSTALLATION

Inspect for alignment and/or damage. Correct as necessary.

CHECK ENGINE OIL LEVEL

On all engines, the oil level should be within the SAFE range on the dipstick. Add oil as required.

CHECK HYDRAULIC CLUTCH MASTER CYLINDER FLUID LEVEL—(CL-9000)

The clutch master cylinder reservoir should be filled to within 12.7mm (1/2 inch) from the top. Use only the fluid meeting specifications or equivalent.

CHECK CLUTCH AND BRAKE MASTER CYLINDER FLUID LEVEL—(L-SERIES)

Push the master cylinder cap retainer to one side and remove the filler cap from the master cylinder. The gasket which seals the master cylinder should come off with the cap. Fill both reservoirs full or 1/4 inch from the top. Install the filler cap, making sure the gasket is properly seated in the cap. Use only brake fluid meeting specifications (ESA-M6C25A) or equivalent.

MANUAL TRANSMISSION LUBRICANT LEVEL

Clean dirt and grease from the area around the filler plug and remove the filler plug from the side of the case.

If lubricant does not flow from the filler hole, fill the case with the specified lubricant until it is level with the bottom of the filler hole. Install the filler plug.

NOTE: Fuller RT6613 and Spicer 1007 transmissions have (2) two filler plugs i.e., main and auxiliary cases, both must be checked.

CHECK AUTOMATIC TRANSMISSION FLUID LEVEL (ALLISON AT 545, MT 643 AND 653 TRANSMISSIONS)

With the truck standing level, parking brake applied, start the engine and move the transmission shift lever through all the shift positions, allowing sufficient time in each range to engage the transmission, stopping at neutral position. The engine should be running at idle and the transmission and engine at operating temperature. Do not turn the engine off during the fluid level check.

1. Clean all dirt from the transmission fluid dipstick cap before removing the dipstick from the filler tube.
2. Pull the dipstick out of the tube, wipe it clean, and put it back into the tube. Be sure it is fully seated.
3. NOTE: The dipstick has two (2) hot marks and two (2) cold marks between the ADD and FULL marks.

Hot Oil Check

Engine idling and transmission at normal temperature (71°-93°C) (160°-200°F). Pull the dipstick out and check fluid level. The level should be between the two top "Hot Marks."

If additional fluid is required, add enough fluid through the filler tube to bring the level between the ADD and FULL marks on the dipstick. Do not overfill the transmission, as foaming and loss of fluid through the vent may result in transmission malfunction.

PRE-DELIVERY SERVICE—CL AND L-SERIES TRUCKS (Continued)

Cold Oil Check

Engine idling and transmission cool to touch (16°-49°C [60°-120°F]). Pull the dipstick out and check the fluid level. The fluid level should be between the two bottom (cold) marks. If additional fluid is required, add oil to bring the oil level to the middle of the "Cold Marks."

Replace the dipstick in the tube, making sure it is fully seated.

CHECK POWER STEERING PUMP RESERVOIR FLUID LEVEL

With engine off, remove cap from power steering reservoir and wipe dipstick clean. Reinstall cap and remove again to check fluid level on dipstick.

Cold Oil Check

With power steering fluid at 20°-49°C (68°-120°F) touchable temperature, check "cold" side of dipstick. Fluid level should be at or between the "add" line and the "full" line. If level indicated is below the "add" line, add fluid to proper range.

Hot Oil Check

With power steering fluid at normal operating temperatures 80°-110°C (176°-230°F) check "hot" side of dipstick. Fluid level should be at or between the "add" line and the "full" line. If level indicated is below the "add" line, add fluid to proper range.

CHECK WINDSHIELD WASHER RESERVOIR LEVEL

Add fluid as necessary.

TILT CAB LIFT PUMP—CL-9000

Check fluid level and top up as required.

CHECK BATTERY CHARGE

Check Battery Charge—Non-Maintenance Free Battery

With battery temperature at 27°C (80°F) the battery should have a specific gravity reading of not less than 1.230. If the battery requires charging, refer to Specifications Chart in Section 31-02, Batteries for battery charging rates.

Maintenance Free Battery

With the engine off, turn headlamps on for 10 seconds and wait for five minutes to stabilize the battery. Place voltmeter leads on the battery terminals and check for open circuit voltage. The minimum open circuit voltage is 12.45. If the battery is below 12.45 open circuit voltage, recharge according to the allowable battery charge time schedule for maintenance free batteries. Refer to the Specification Chart in Section 31-02, Batteries for battery charge time schedule. Do not exceed a 30 amp charge rate. If gassing or spewing of the electrolyte occurs during charging, the charge rate must be reduced.

Body Operations

INSTALL LOOSE ITEMS SUCH AS ANTENNA(S) AND EXHAUST/AIR CLEANER STACKS

Install loose items such as antenna(s) and exhaust/air cleaner stacks. Check for correct installation.

DOORS—CHECK OPERATION OF LATCHES

Be sure all doors open easily and close securely without being slammed.

Be sure all doors lock and unlock from inside and outside the vehicle.

SEATBACKS—CHECK OPERATION OF LATCHES

Be sure latches operate properly and retain seatbacks. Be sure seats operate properly.

Chassis Operations

SHOCK ABSORBER SHIPPING SPACER

Remove shock absorber shipping spacer from cab (air suspended cabs only).

AXLE LUBRICANT LEVEL

Clean dirt and grease from the area around the filler plug, and check level.

If lubricant does not flow from the filler hole, fill the axle with specified lubricant until level with the bottom of the filler hole. Install the filler plug. When checking, the axle must be in normal curb position.

CHECK MANUAL STEERING GEAR HOUSING LUBRICANT

Check the manual steering gear housing lubricant and fill with the specified lubricant, as required.

TRANSMISSION AND ENGINE MOUNTS

Visually inspect engine and transmission fasteners; tighten as required. Refer to Section 16-10, General Manual Transmission Service.

LINES, FITTINGS, CONNECTIONS AND COMPONENTS—CHECK FOR LEAKS INCLUDING AUDIBLE LEAKS IN AIR BRAKE FITTINGS

Check lines, fittings, connections and components for fluid leakage. Start engine and build air brake pressure. Shut engine down and observe air pressure gauge for pressure drop. Listen for audible air line leaks.

CHECK AUTOMATIC TRANSMISSION OR MANUAL TRANSMISSION AND CLUTCH PERFORMANCE

For trucks equipped with Allison automatic transmissions, refer to the Allison owner's manual for predelivery procedures.

PRE-DELIVERY SERVICE—CL AND L-SERIES TRUCKS (Continued)

CHECK HYDRAULIC PARKING BRAKE MASTER CYLINDER RESERVOIR

Check per Section 12-75 and top up as required.

CHECK FRONT WHEEL TOE-IN AND ADJUST AS REQUIRED

Check toe-in and adjust to specifications as required (Section 14-01).

TORQUE ALL WHEEL NUTS TO SPECIFICATION

Wheel stud nuts and clamps should be tightened alternately and evenly to draw the wheel evenly against the hub and drum.

On dual wheels, back off the outer nut before tightening inner stud. Then tighten outer nut. Some dual wheels are alternately flared inward and outward. These surfaces must be mated when wheels are mounted.

Tighten all stud nuts to recommended specification for the vehicle and wheel type.

ADJUST TIRE PRESSURES TO SPECIFICATION

Be sure pressure agrees with specifications for the tire and vehicle model.

EXHAUST SYSTEM INCLUDING EXTENSION AND RAIN CAP (IF SO EQUIPPED)

Inspect for proper assembly and damage to exhaust components. Check proper position of rain cap. Cap raises to rear to prevent rain entry. Check for adequate clearance to adjacent components. Tighten loose fasteners.

STEERING LINKAGE

Check the steering gear attaching bolts to be sure they are tightened.

Check the linkage for tightness and proper installation of cotter pins.

Check the intermediate shaft for tightness of pot joint bolt and nut and tightness of flex coupling nuts.

SUSPENSION

Inspect the front and rear suspension for proper assembly and components. Check to be sure all lock tabs are bent for nut and bolt retention and that all cotter pins are properly installed.

FLUID, AIR LINES, ELECTRICAL HARNESSES AND CONNECTORS

Check lines and hoses for leaks, damage, kinks or interference with adjacent moving or frictional components. Make sure the lines are properly installed in the routing clamps.

CHECK TORQUE ON FRONT AND REAR U-BOLTS

Check "U" bolt torque to specifications (Section 14-01).

TORQUE REAR AXLE SHAFT FLANGE NUTS ON SADDLE MOUNTED DELIVERIES (ALL)—(L-SERIES)

INSTALL NEW GASKETS ON SADDLE MOUNTED VEHICLE (IF REQUIRED)—(L-SERIES)

Be sure nuts are tightened to the specified torque. Use an alternating sequence for even tightening.

CHECK REAR BRAKE ADJUSTMENT ON SADDLE MOUNTED DELIVERIES—(L-SERIES)

Raise the vehicle on a hoist. While rotating the drum forward, verify that both primary and secondary shoes slightly drag on the drum.

TANDEM SUSPENSION (EXCEPT HENDRICKSON WALKING BEAM)—CHECK ALIGNMENT

Check and adjust suspension alignment according to procedures found in the appropriate section of the Shop Manual.

Road Test Operations

CHECK ENGINE DRIVEABILITY (DURING ROAD TEST)

During start-up, acceleration, cruise and deceleration, check for unsatisfactory engine performance such as:

- Prolonged starting (cranking).
- Hard starting (does not quite catch).
- False starts (quits immediately after starting).
- Idles rough, stalls.
- Idles unusually slow.
- Idles unusually fast (races, pulls).
- Stumbles, backfires, stalls or hesitates during acceleration.
- Spark knock during light-to-moderate acceleration.
- Sluggish, poor acceleration.
- Surges or lopes.
- Hissing, unusual noises or vibration under hood.
- Smokes.
- Does not shift properly (hard shifting or engaging, delays or jerks).
- Any other unsatisfactory condition observed by technician.

Necessary repairs may be claimed under provisions of the warranty.

PRE-DELIVERY SERVICE—CL AND L-SERIES TRUCKS (Continued)

ALL INSTRUMENTS

Check for proper operation of all instruments.

ALL WARNING DEVICES

Check for proper operation of all warning devices, i.e., transmission, axle, engine, coolant, exhaust temperature; engine oil pressure, air brake system pressure.

ALL LIGHTS

Check headlamps (high and low beam), brake lamps and interior and exterior lamp operation.

TURN SIGNALS AND HAZARD WARNING FLASHER

Operate turn signal and hazard controls and check exterior and interior lamp operation.

PARKING BRAKE

Check the operation of the parking brake. Check warning lamp/buzzer to sequence in Operator's Manual

SERVICE BRAKE

Check foot brake pedal height before road testing. Then check and correct the following, as required: Pull in either direction, harshness or noise, excessive pedal effort, or spongy feel and operation of the warning light. Avoid sudden hard stops—make slow, gradual stops.

CHECK AUTOMATIC TRANSMISSION OR MANUAL TRANSMISSION AND CLUTCH PERFORMANCE

For trucks equipped with Allison automatic transmissions, refer to the Allison owner's manual for predelivery procedures.

For manual transmissions check shifting following the shift pattern through all gear ranges. Upshifts and downshifts should be smooth and correctly timed. Check for chatter, stripping, excessive pedal effort or noise.

CHECK STEERING CONTROL

Road test the vehicle, and check for harshness, noise, wander or free play. Check steering wheel return for stiffness or inconsistency in either direction. Correct as required.

HAND THROTTLE

With engine running, unlock throttle control and pull control out and lock.

CHECK CHOKE CABLE AND LINKAGE FOR FREEDOM OF MOVEMENT—(L-SERIES)

Physically check choke cable and linkage (on carburetor) for freedom of operation.

Check carburetor linkage and choke control for proper adjustment.

ACCELERATOR PEDAL

Check pedal for proper operation.

TWO-SPEED AXLE

Check operation of two-speed axle.

HORN

Check horn operation.

WINDSHIELD WIPERS AND WASHERS

Check for proper operation including wiper sweep and park.

HEATER/DEFROSTER/AIR CONDITIONER/ VENTILATION SYSTEM

Heater/Defroster—Move the temperature control lever to warm position and function control lever to the various function positions. Check for heated air at these locations including passenger-side heater fan.

A/C—Move the function control lever to A/C and temperature lever to cool. Turn fan switch to ON. Check at vent registers. Check driver's compartment controls.

RADIO SYSTEM

Check for proper operation of radio and tape player, if so equipped. Set pushbuttons for local stations.

ALL OPTIONAL EQUIPMENT

Check optional equipment as required.

CHECK FOR SQUEAKS AND RATTLES

Throughout the road test listen for squeaks and rattles. Listen for anything loose and for objectionable wind noise or vibration.

DRIVEABILITY

Check for emission compliance requirements, check emission control system for loose, missing or damaged components. Also, visually check electrical and vacuum components for proper connections to ensure system integrity.

Appearance Operations

WASH AND PERFORM DETAILED CLEANUP OF INTERIOR AND EXTERIOR

Do not remove the tape under the hood flange.

Remove the windshield markings and tapes. Wash the vehicle and check for leaks. Inspect metal and paint condition, and touch up chips and scratches. Check for excess sealer.

CAUTION: Do not use steel wool, abrasive type cleaners, or strong detergents containing highly alkaline or caustic agents on chrome-plated materials, aluminum wheels, or anodized aluminum parts because the protective coating may be damaged and cause discoloration or paint deterioration.

PRE-DELIVERY SERVICE—CL AND L-SERIES TRUCKS (Continued)

CHECK EXTERIOR AND INTERIOR FOR PROPER APPEARANCE AND FIT

Inspect the body exterior for door and hood gaps or evidence of rubbing or binding with adjacent panels. Check exterior moldings for adequate retention or extreme misalignment. Inspect bumpers for appearance.

Inspect interior paint, for chips and scratches. Check for safe trim sealer and excess sealer.

Correct minor chips and scratches with brush or spray can touch-up paint and polish out any surface blemishes.

TOUCH UP MINOR PAINT BLEMISHES—BRUSH, AEROSOL CAN AND/OR SPOT POLISH

Check for any imperfections in paint and metal finish.

Correct minor chips and scratches with brush or spray can touch-up paint and polish out any surface blemishes.

CHECK FOR NECESSARY OWNER INFORMATION MATERIAL IN GLOVE BOX

Check in cab for:

- Warranty Facts Booklet
- Owner Card
- Owner Guide
- Consumer Information Folder
- Other Owner Publications
- Incomplete Vehicle Booklet (if necessary)
- Engine Owner Manual (CL)
- DSO Parts List (CL)
- Engine Warranty (CL)

See that the starting instructions sleeve is on the left-hand visor.

REMOVE SEAT AND CARPET PROTECTIVE COVERS

Remove the plastic covers from the seats. See that there are no stains or dirt on the seat material.

Remove protective covers from the carpeting and make sure there is no dirt beneath them.

PRE-DELIVERY SERVICE—CL AND L-SERIES TRUCKS (Continued)

CARGO TRUCK

Check/Inspect the Vehicle as Shown: Perform Specified Adjustments When Required.

UNDERHOOD OPERATIONS

- ☐ Cooling system fluid level — check and top up as required.
- ☐ Engine oil level — check and top up as required.
- ☐ Clutch fluid level — check and top up as required.
- ☐ Transmission fluid/lube level — check and top up as required.
- ☐ Axle(s) lube level — check and top up as required.

CHASSIS OPERATIONS

- ☐ Lines, hoses, fittings, connections and components — check visually for liquid leaks, check for audible leaks in air brake system.
- ☐ Power steering fluid level (hot) — check and top up as required.
- ☐ Windshield washer reservoir fluid — top up.
- ☐ Tire pressures — adjust to specifications.
- ☐ Suspension — visually check for damage and loose fasteners.

CHASSIS OPERATIONS (Cont'd)

- ☐ Electrical harnesses and connectors — visually check for damage and loose fasteners and connectors.
- ☐ Brake fluid — check and top up as required.
- ☐ Front wheel toe-in — check and adjust.

ROAD TEST OPERATIONS

- ☐ Check overall performance of vehicle.

APPEARANCE OPERATIONS

- ☐ Install tail lamps.
- ☐ Wash and perform detailed clean-up of interior and exterior.

CY3120-2A

UNDERHOOD OPERATIONS

Check Supply Tank Coolant Level

With the engine cold (ambient temperature) check fluid level at coolant supply tank. The coolant level must be between the "MIN" and "MAX" lines on the supply tank. Adjust as required.

CAUTION: Do not operate engine if coolant level is below "MIN" line.

Check Engine Oil Level

After running the vehicle, allow a few minutes to let the engine oil stabilize in oil pan sump. The oil level must be maintained between the "MIN" and "MAX" lines on the dipstick. Adjust oil level as required.

CAUTION: Do not run the engine when the oil level is below the "MIN" line.

Check Hydraulic Clutch Master Cylinder Fluid Level

The clutch master cylinder reservoir should be filled to within 12.7mm (1/2 inch) of the top. Adjust as required.

Check Automatic Transmission Fluid Level (Allison 545 Transmission)

With the truck standing level and the parking brake applied, start the engine and move the transmission shift lever through all the shift positions, allowing sufficient time in each range to engage the transmission, stopping at NEUTRAL position. The engine should be running at idle and the transmission and engine at operating temperature. Do not turn the engine off during the fluid level check.

1. Clean all dirt from transmission fluid dipstick cap before removing dipstick from filler tube.
2. Pull dipstick out of tube, wipe it clean, and push it back into tube. Be sure it is fully seated.

NOTE: The dipstick has two hot marks and two cold marks between the ADD and FULL marks.

Hot Oil Check

With engine idling and transmission at normal temperature of 71-93°C (160-200°F), pull the dipstick out and check fluid level. The level should be between the two top "HOT" marks.

If additional fluid is required, add enough fluid through the filler tube to bring the level between the ADD and FULL marks on the dipstick. Do not overfill the transmission, as foaming and loss of fluid through the vent may result in transmission malfunction.

Cold Oil Check

With engine idling and transmission at 16-49°C (60-120°F), cool to touch, pull the dipstick out and check the fluid level. The fluid level should be between the two bottom (COLD) marks. If additional fluid is required, add oil to bring the oil level to the middle of the "COLD" marks.

Replace the dipstick in the tube, making sure it is fully seated.

Check Manual Transmission Fluid Level

Clean dirt and grease from the area around the filler plug and remove the filler plug from the side of the case. If lubricant does not flow from the filler hole, fill the case to the top of the filler hole with the specified lubricant. Install the filler plug.

Check Rear Axle Fluid Level

Remove filler plug. Full level is from 9.5mm to 12.7mm (3/8 inch to 1/2 inch) below fill plug hole. If the lubricant level is more than 12.7mm (1/2 inch) below the bottom of the filler hole, fill with specified lubricant.

CHASSIS OPERATIONS

Fluid Lines, Air Lines, and Electrical Harness

Check lines, fittings, connections and components on underside for proper assembly and leaks (including air brake system). Visually inspect electrical harness routings and connector. Inspect for loose connections and loose fasteners. After road test, check for fluid leaks. Check for audible leaks in air brake system.

Check Power Steering Pump Reservoir Fluid Level

With engine off, remove cap from power steering reservoir and wipe dipstick clean. Install cap and remove again to check fluid level on dipstick.

Cold Oil Check

With power steering fluid at touchable temperature of 20-49°C (68-120°F), check "COLD" side of dipstick. Fluid level should be at or between the "ADD" line and the "FULL" line. If level indicated is below the "ADD" line, add fluid to proper range.

CHASSIS OPERATIONS (Continued)

Hot Oil Check

With power steering fluid at normal operating temperatures of 80-110°C (176-230°F), check "HOT" side of dipstick. Fluid level should be at or between the "ADD" line and the "FULL" line. If level indicated is below the "ADD" line, add fluid to proper range.

Check Windshield Washer Reservoir Fluid Level

Add fluid, as necessary.

Adjust Tire Pressures to Specification

Be sure pressure agrees with specifications for the tire and vehicle model. Refer to Section 11-01, General Wheel and Tire Assembly.

Front and Rear Suspension

Inspect the front and rear suspension for proper assembly and components. Check to be sure all lock tabs are bent for nut and bolt retention and that all cotter pins are properly installed.

Check Brake Master Cylinder Fluid Level

Push the master cylinder cap retainer to one side and remove the filler cap from the master cylinder. The gasket that seals the master cylinder should come off with the cap. Fill both reservoirs full or 6.3mm (1/4 inch) from the top. Install the filler cap, making sure the gasket is properly seated in the cap. Use DOT 3 Heavy Duty Brake Fluid C6AZ-19542-A or equivalent.

Check Front Wheel Toe-In and Adjust as Required

Refer to the Specifications Chart for correct toe-in settings.

If the toe-in is incorrect, loosen the clamp bolts at each end of the spindle connecting rod tube. Rotate the tube until the correct toe is obtained. Tighten to 42-56.9 N·m (31-42 ft-lb) for 1/2-20 clamp bolts or 67-94 N·m (50-70 ft-lb) for 5/8-18 clamp bolts. Recheck the toe-in to make sure that no change occurred when the bolts were tightened.

ROAD TEST

Check Starting of Engine in Park and Neutral

(Automatic Transmission)

Engine should start with shift lever in NEUTRAL and/or PARK positions only. If this is not the case, verify that the manual linkage adjustment is to specification and readjust as required in "D" (DRIVE) position.

Check Operation of Horn, Windshield Wipers and Washers, Lamps

Signals and Instruments

HORNS

Check to be sure horn(s) blow at all contact positions.

Windshield Wiper and Washer

Check for proper operation, including wiper sweep and park.

Lamp and Signals

Check switches and brightness of lamps, including operation of oil pressure and alternator warning lamps. Check detent action and return of turn signal lever by making full left and full right turns during road test.

Speedometer, Odometer and Tachometer

Verify that gauges operate and needles do not bounce.

Alternator and Voltage Regulator

Turn headlamps on and check the charge indicator gauge or lamp to be sure charging system is not discharging.

Check Operation of Heater, Defroster and Ventilation System

Radio, Seat Belt Warning System and All Other Optional Equipment

HEATER, DEFROSTER

Place selector lever in HEAT position. Move blower switch through each speed position and check for corresponding change in air discharge at outlets. Move temperature control lever through entire range and check for proper change in discharge air temperature. Repeat this procedure in DEFROST position and check for air discharge through defroster nozzles.

FRESH VENTS

Check all vents, if so equipped, by operating vent controls.

RADIO

Check for proper operation of radio and tape player, if so equipped. Set radio pushbuttons for local stations.

SEAT AND SHOULDER BELTS

Check seat belt warning system for proper operation. Check automatic retractors for full extension, retractions and retention of belt. Check buckle and clasp for proper retention, release, and length adjustment.

ROAD TEST (Continued)

Check Brakes (Including Parking Brake and Warning Lamp)

Check foot brake pedal height before road testing. Then, check and correct the following as required: Pull in either direction, harshness or noise, excessive pedal effort or spongy feel, and operation of the warning lamp. Avoid sudden hard stops. Make slow, gradual stops.

Check the operation of the parking brake and indicator lamp. If equipped with an indicator lamp, be sure it glows when parking brake is engaged.

Check Steering Control

Road test the vehicle, and check for harshness, noise, wander or free play. Check steering wheel return for stiffness or inconsistency in either direction. Correct as required.

Check Automatic Transmission or Manual Transmission and Clutch

For trucks equipped with an Allison automatic transmission, refer to the Allison owner's manual for pre-delivery procedures.

SHIFT TIMING AND QUALITY

Both upshifts and downshifts should be smooth and correctly timed. Adjust, if necessary.

Operation of Two-Speed Axle

Operate axle control switch, and check for correct shift, engagement and operation.

Check for Squeaks and Rattles and Belt Noise

Throughout the road test and especially on rough roads, listen for squeaks or rattles.

Listen for anything loose and for objectionable wind noise or vibration.

APPEARANCE OPERATIONS

Wash and Perform Detailed Cleanup of Interior and Exterior

Remove all shipping covers from vehicle.

Remove the windshield markings and tapes. Wash the vehicle and check for leaks. Inspect metal and paint condition, and touch up chips and scratches. Check for excess sealer.

CAUTION: Do not use steel wool, abrasive type cleaners, or strong detergents containing highly alkaline or caustic agents on chrome-plated materials, aluminum wheels, or anodized aluminum parts as the protective coating may be damaged and cause discoloration or paint deterioration.

Check Exterior and Interior for Proper Appearance and Fit

Inspect the body exterior for door and hood gaps or evidence of rubbing or binding with adjacent panels. Check exterior moldings for adequate retention or extreme misalignment. Inspect bumper for appearance.

Inspect interior paint for chips and scratches. Check for safe trim sealer and excess sealer.

Touch up Minor Paint Blemishes—Brush, Aerosal Can and/or Spot Polish

Check for any imperfections in paint and metal finish.

Correct minor chips and scratches with brush or spray can touchup paint. Polish out any surface blemishes.

Check for Necessary Owner Information Material in Glove Compartment

Check glove compartment for:

- Warranty Facts Booklet
- Owner's Card
- Owner's Guide
- Consumer Information Folder
- Other Owner Publications
- Incomplete Vehicle booklet (if necessary)

See that the starting instructions sleeve is on the LH visor.

Remove Seat and Carpet Protective Covers

Remove the plastic covers from the upholstery. See that there are no stains or dirt on the upholstery.

Remove protective covers from the carpeting and make sure there is no dirt beneath them.

Optional Equipment

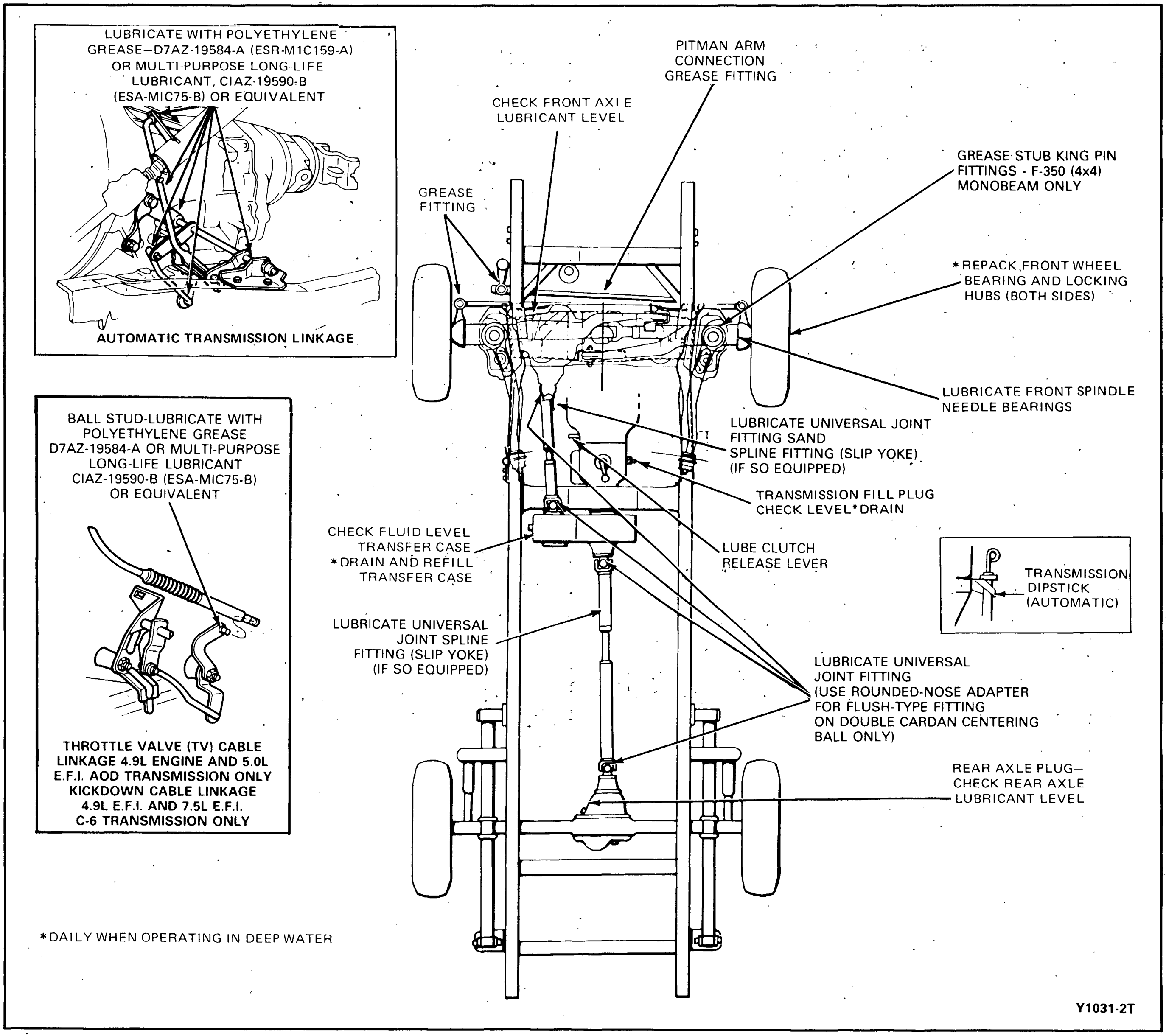
Check for installation and correct operation of all optional equipment.

SECTION 50-03 Lubrication Charts and Lubricant Specifications

SUBJECT	PAGE	SUBJECT	PAGE
LUBRICATION CHARTS	50-03-1	SPECIFICATIONS	50-03-8

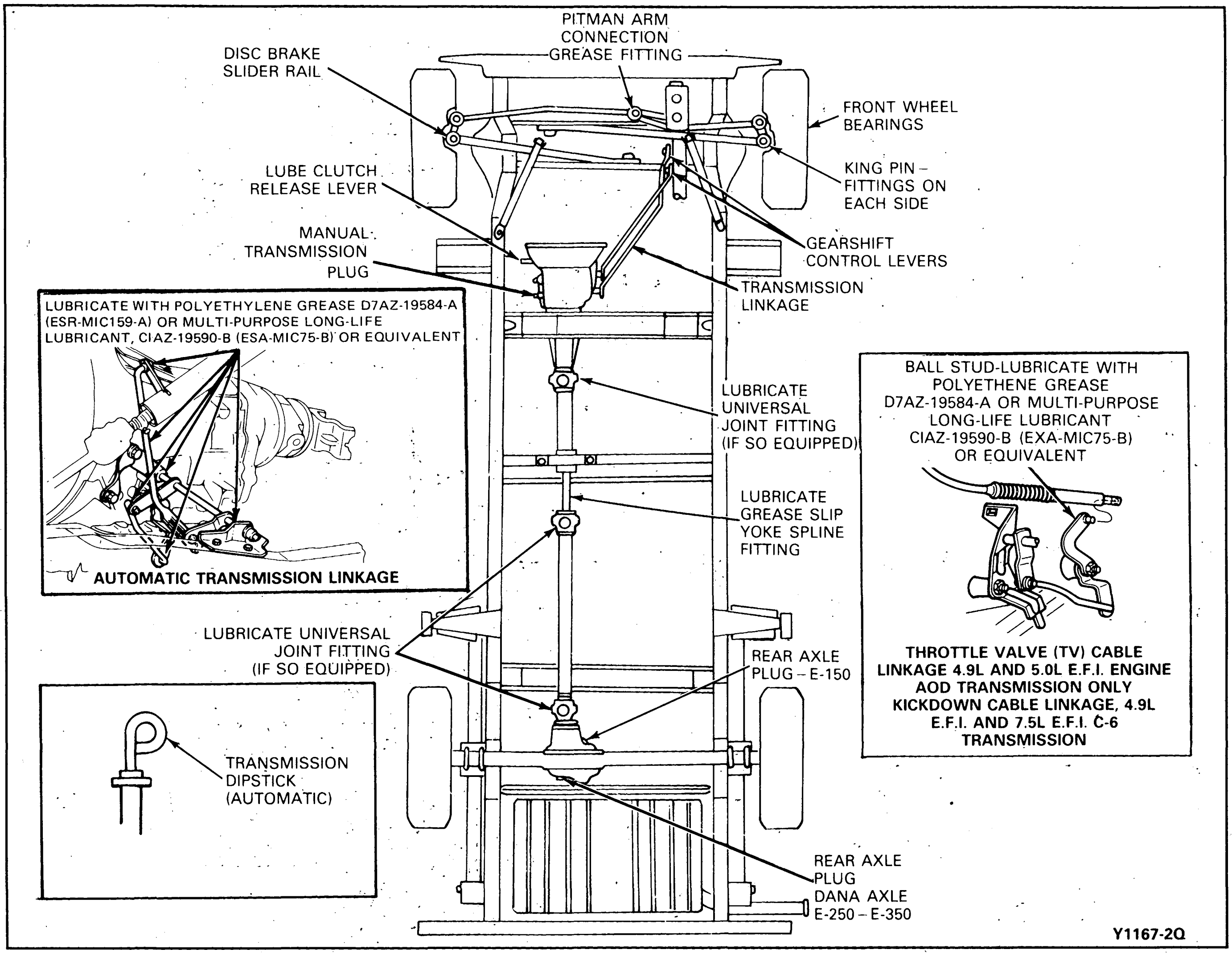
LUBRICATION CHARTS

Important lubrication points for typical chassis and engines are shown in Figs. 1 thru 11. Vehicles with optional equipment may have slightly different or additional lubrication points. When special equipment or accessories are installed on the truck, consult the manufacturer's literature for lubrication procedures. A table of recommended lubricants is included at the end of this Section.


LUBRICATE WITH POLYETHYLENE GREASE—D7AZ-19584-A (ESR-M1C159-A) OR MULTI-PURPOSE LONG-LIFE LUBRICANT, CIAZ-19590-B (ESA-MIC75-B) OR EQUIVALENT
AUTOMATIC TRANSMISSION LINKAGE
BALL STUD-LUBRICATE WITH POLYETHYLENE GREASE D7AZ-19584-A OR MULTI-PURPOSE LONG-LIFE LUBRICANT CIAZ-19590-B (ESA-MIC75-B) OR EQUIVALENT
THROTTLE VALVE (TV) CABLE LINKAGE 4.9L ENGINE AND 5.0L E.F.I. AOD TRANSMISSION ONLY KICKDOWN CABLE LINKAGE 4.9L E.F.I. AND 7.5L E.F.I. C-6 TRANSMISSION ONLY
PITMAN ARM CONNECTION GREASE FITTING
CHECK FRONT AXLE LUBRICANT LEVEL
GREASE FITTING
GREASE STUB KING PIN FITTINGS - F-350 (4x4) MONOBEAM ONLY
*REPACK FRONT WHEEL BEARING AND LOCKING HUBS (BOTH SIDES)
LUBRICATE FRONT SPINDLE NEEDLE BEARINGS
LUBRICATE UNIVERSAL JOINT FITTING SAND SPLINE FITTING (SLIP YOKE) (IF SO EQUIPPED)
TRANSMISSION FILL PLUG CHECK LEVEL*DRAIN
CHECK FLUID LEVEL TRANSFER CASE *DRAIN AND REFILL TRANSFER CASE
LUBE CLUTCH RELEASE LEVER
TRANSMISSION DIPSTICK (AUTOMATIC)
LUBRICATE UNIVERSAL JOINT SPLINE FITTING (SLIP YOKE) (IF SO EQUIPPED)
LUBRICATE UNIVERSAL JOINT FITTING (USE ROUNDED-NOSE ADAPTER FOR FLUSH-TYPE FITTING ON DOUBLE CARDAN CENTERING BALL ONLY)
REAR AXLE PLUG—CHECK REAR AXLE LUBRICANT LEVEL
Y1031-2T

*DAILY WHEN OPERATING IN DEEP WATER

FIG. 1 Chassis Lubrication Points—Typical Bronco and F-150—F-250—F-350 4-Wheel Drive (4x4)

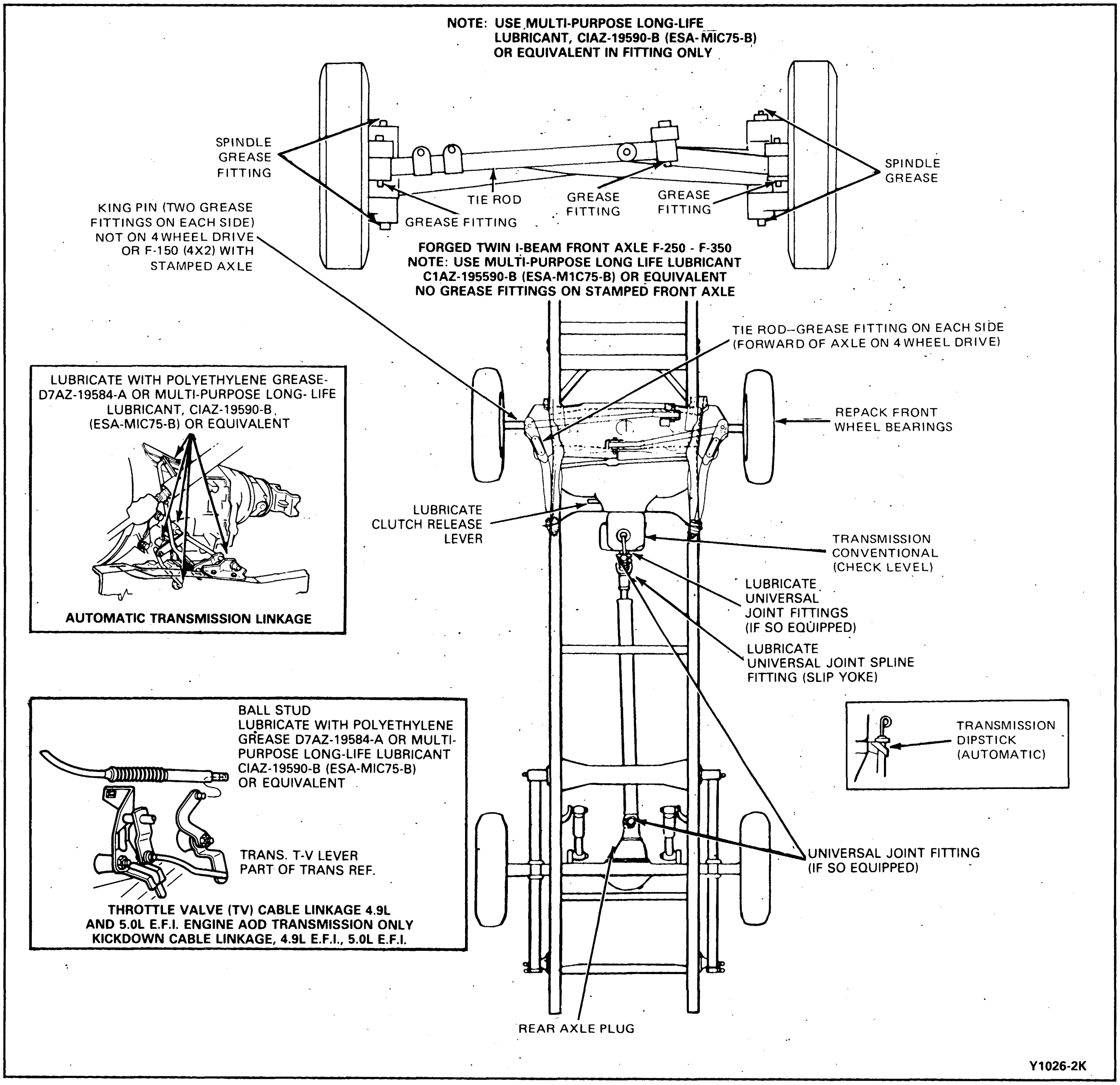

PITMAN ARM CONNECTION GREASE FITTING
DISC BRAKE SLIDER RAIL
FRONT WHEEL BEARINGS
KING PIN – FITTINGS ON EACH SIDE
LUBE CLUTCH RELEASE LEVER
MANUAL TRANSMISSION PLUG
GEARSHIFT CONTROL LEVERS
TRANSMISSION LINKAGE
AUTOMATIC TRANSMISSION LINKAGE
LUBRICATE UNIVERSAL JOINT FITTING (IF SO EQUIPPED)
LUBRICATE GREASE SLIP YOKE SPLINE FITTING
LUBRICATE UNIVERSAL JOINT FITTING (IF SO EQUIPPED)
REAR AXLE PLUG – E-150
TRANSMISSION DIPSTICK (AUTOMATIC)
REAR AXLE PLUG DANA AXLE E-250 – E-350
Y1167-2Q

LUBRICATE WITH POLYETHYLENE GREASE D7AZ-19584-A (ESR-MIC159-A) OR MULTI-PURPOSE LONG-LIFE LUBRICANT, CIAZ-19590-B (ESA-MIC75-B) OR EQUIVALENT

BALL STUD-LUBRICATE WITH POLYETHENE GREASE D7AZ-19584-A OR MULTI-PURPOSE LONG-LIFE LUBRICANT CIAZ-19590-B (EXA-MIC75-B) OR EQUIVALENT

THROTTLE VALVE (TV) CABLE LINKAGE 4.9L AND 5.0L E.F.I. ENGINE AOD TRANSMISSION ONLY KICKDOWN CABLE LINKAGE, 4.9L E.F.I. AND 7.5L E.F.I. C-6 TRANSMISSION

FIG. 2 Chassis Lubrication Points—Typical E-150—E-250—E-350



NOTE: USE MULTI-PURPOSE LONG-LIFE LUBRICANT, CIAZ-19590-B (ESA-MIC75-B) OR EQUIVALENT IN FITTING ONLY

FORGED TWIN I-BEAM FRONT AXLE F-250 - F-350
NOTE: USE MULTI-PURPOSE LONG LIFE LUBRICANT C1AZ-195590-B (ESA-M1C75-B) OR EQUIVALENT
NO GREASE FITTINGS ON STAMPED FRONT AXLE

LUBRICATE WITH POLYETHYLENE GREASE-D7AZ-19584-A OR MULTI-PURPOSE LONG- LIFE LUBRICANT, CIAZ-19590-B, (ESA-MIC75-B) OR EQUIVALENT

AUTOMATIC TRANSMISSION LINKAGE

BALL STUD
LUBRICATE WITH POLYETHYLENE GREASE D7AZ-19584-A OR MULTI-PURPOSE LONG-LIFE LUBRICANT CIAZ-19590-B (ESA-MIC75-B) OR EQUIVALENT

TRANS. T-V LEVER PART OF TRANS REF.

THROTTLE VALVE (TV) CABLE LINKAGE 4.9L AND 5.0L E.F.I. ENGINE AOD TRANSMISSION ONLY
KICKDOWN CABLE LINKAGE, 4.9L E.F.I., 5.0L E.F.I.

SPINDLE GREASE FITTING
KING PIN (TWO GREASE FITTINGS ON EACH SIDE) NOT ON 4 WHEEL DRIVE OR F-150 (4X2) WITH STAMPED AXLE
TIE ROD
GREASE FITTING
GREASE FITTING
GREASE FITTING
SPINDLE GREASE
TIE ROD—GREASE FITTING ON EACH SIDE (FORWARD OF AXLE ON 4 WHEEL DRIVE)
REPACK FRONT WHEEL BEARINGS
LUBRICATE CLUTCH RELEASE LEVER
TRANSMISSION CONVENTIONAL (CHECK LEVEL)
LUBRICATE UNIVERSAL JOINT FITTINGS (IF SO EQUIPPED)
LUBRICATE UNIVERSAL JOINT SPLINE FITTING (SLIP YOKE)
TRANSMISSION DIPSTICK (AUTOMATIC)
UNIVERSAL JOINT FITTING (IF SO EQUIPPED)
REAR AXLE PLUG
Y1026-2K

FIG. 3 Chassis Lubrication Points—Typical F-150—F-250—F-350 (4x2)

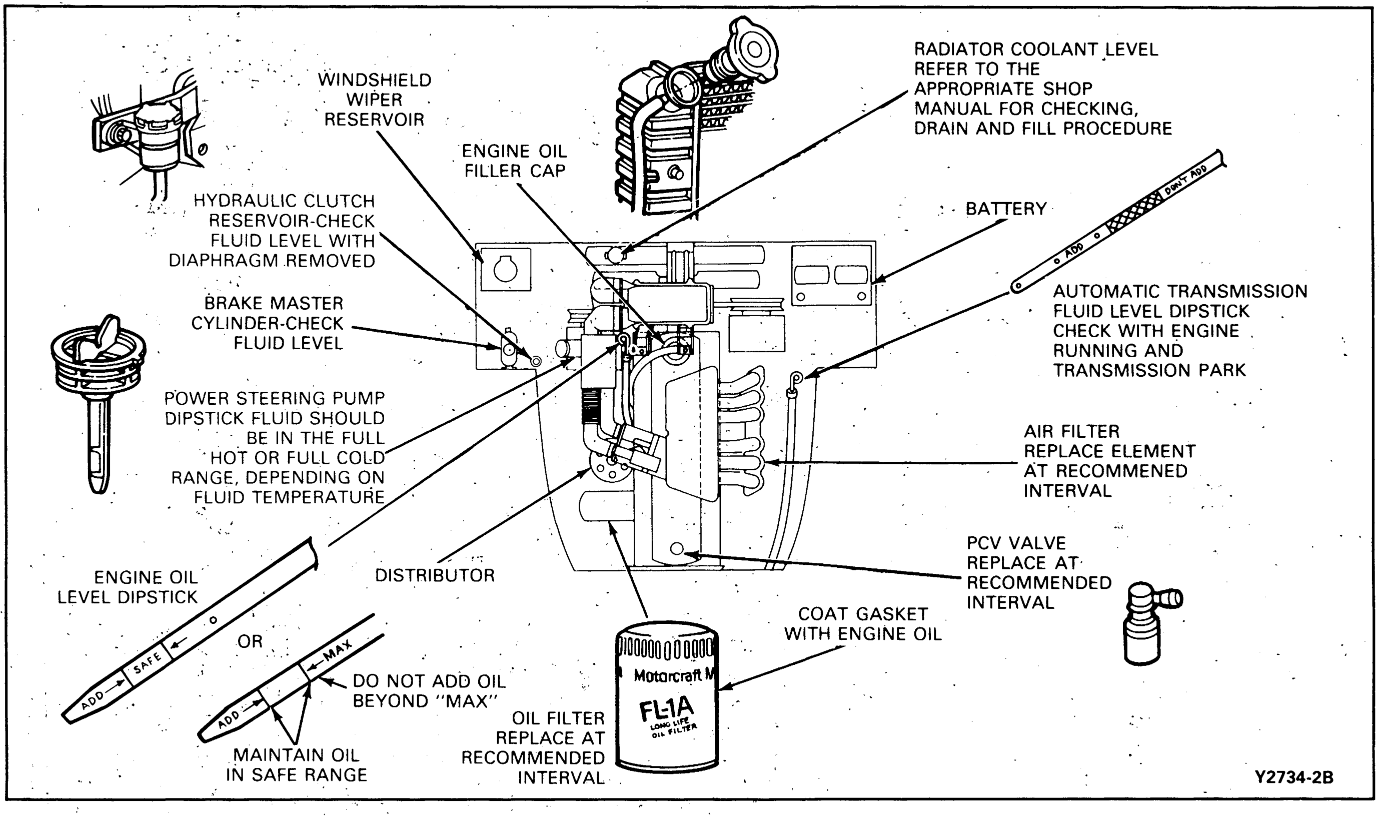

WINDSHIELD WIPER RESERVOIR
ENGINE OIL FILLER CAP
RADIATOR COOLANT LEVEL REFER TO THE APPROPRIATE SHOP MANUAL FOR CHECKING, DRAIN AND FILL PROCEDURE
HYDRAULIC CLUTCH RESERVOIR-CHECK FLUID LEVEL WITH DIAPHRAGM REMOVED
BATTERY
BRAKE MASTER CYLINDER-CHECK FLUID LEVEL
AUTOMATIC TRANSMISSION FLUID LEVEL DIPSTICK CHECK WITH ENGINE RUNNING AND TRANSMISSION PARK
POWER STEERING PUMP DIPSTICK FLUID SHOULD BE IN THE FULL HOT OR FULL COLD RANGE, DEPENDING ON FLUID TEMPERATURE
AIR FILTER REPLACE ELEMENT AT RECOMMENED INTERVAL
ADD
DON'T ADD
ENGINE OIL LEVEL DIPSTICK
DISTRIBUTOR
PCV VALVE REPLACE AT RECOMMENDED INTERVAL
COAT GASKET WITH ENGINE OIL
OR
ADD
SAFE
MAX
DO NOT ADD OIL BEYOND "MAX"
OIL FILTER REPLACE AT RECOMMENDED INTERVAL
Motorcraft
FL-1A
LONG LIFE OIL FILTER
MAINTAIN OIL IN SAFE RANGE
Y2734-2B

FIG. 4 Engine Lubrication Points—4.9L—I-6 Gasoline Engine—E-150—E-350

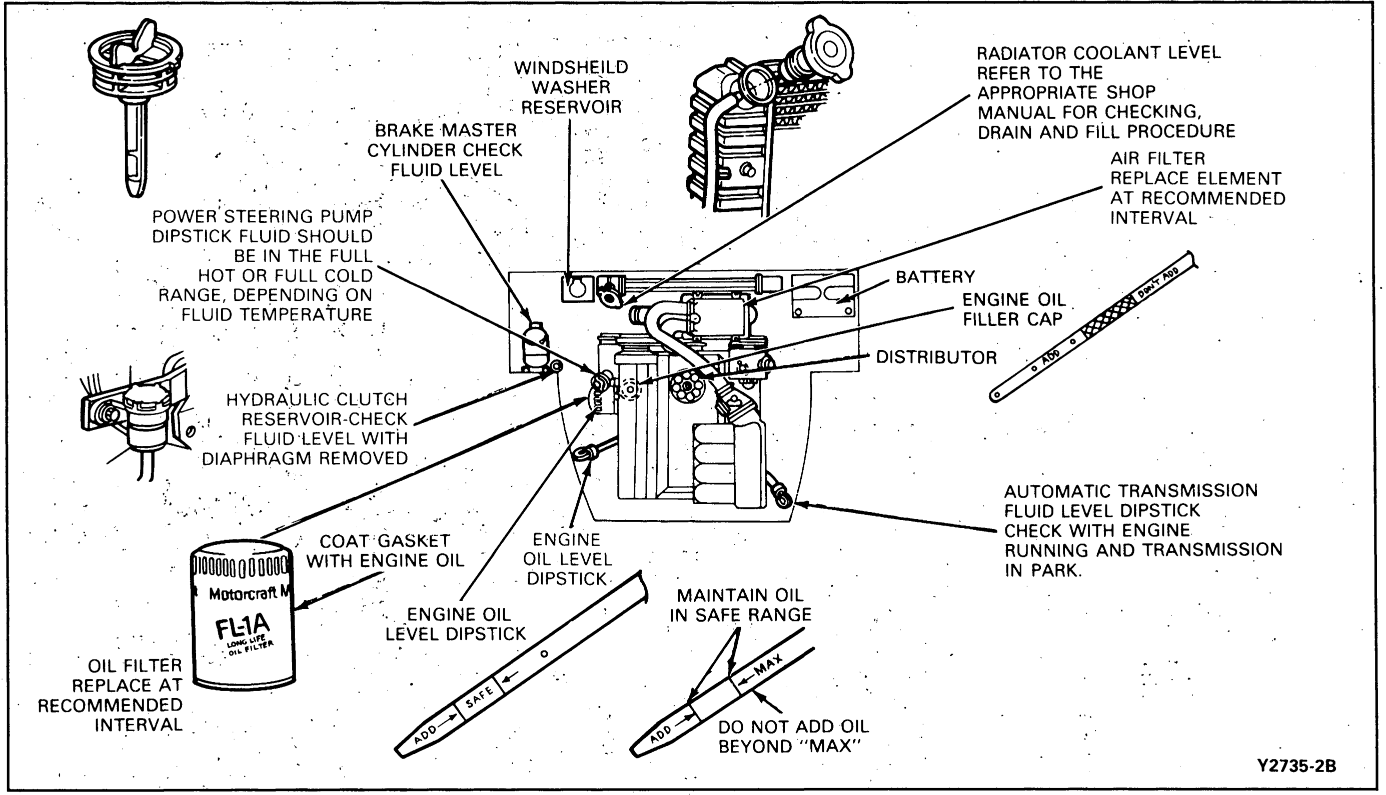

WINDSHEILD WASHER RESERVOIR
BRAKE MASTER CYLINDER CHECK FLUID LEVEL
RADIATOR COOLANT LEVEL REFER TO THE APPROPRIATE SHOP MANUAL FOR CHECKING, DRAIN AND FILL PROCEDURE
AIR FILTER REPLACE ELEMENT AT RECOMMENDED INTERVAL
POWER STEERING PUMP DIPSTICK FLUID SHOULD BE IN THE FULL HOT OR FULL COLD RANGE, DEPENDING ON FLUID TEMPERATURE
BATTERY
ENGINE OIL FILLER CAP
DISTRIBUTOR
ADD
DON'T ADD
HYDRAULIC CLUTCH RESERVOIR-CHECK FLUID LEVEL WITH DIAPHRAGM REMOVED
AUTOMATIC TRANSMISSION FLUID LEVEL DIPSTICK CHECK WITH ENGINE RUNNING AND TRANSMISSION IN PARK.
COAT GASKET WITH ENGINE OIL
ENGINE OIL LEVEL DIPSTICK
Motorcraft
FL-1A
LONG LIFE OIL FILTER
ENGINE OIL LEVEL DIPSTICK
MAINTAIN OIL IN SAFE RANGE
OIL FILTER REPLACE AT RECOMMENDED INTERVAL
ADD
SAFE
MAX
DO NOT ADD OIL BEYOND "MAX"
Y2735-2B

FIG. 5 Engine Lubrication Points—5.8L Gasoline Engine—E-150—E-350

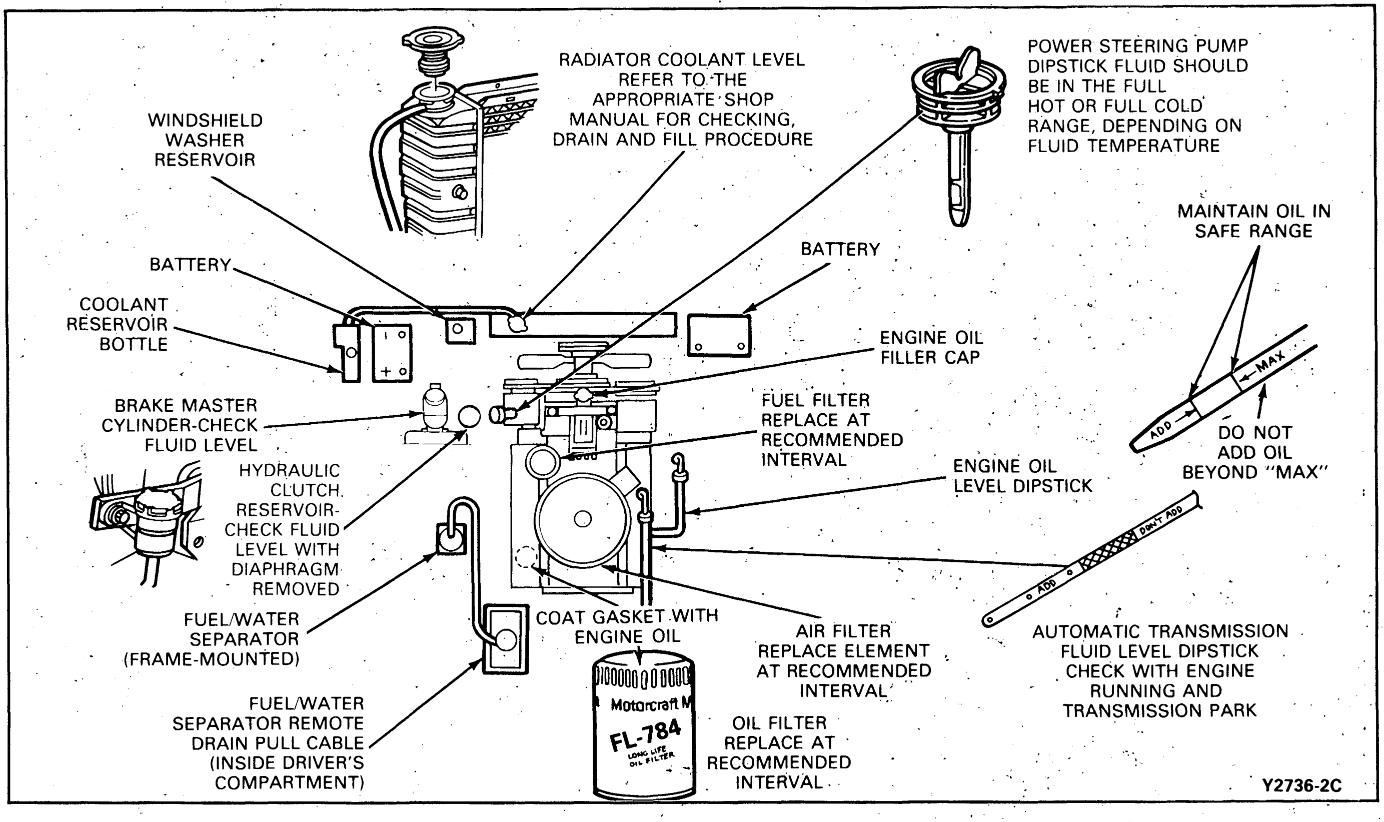

RADIATOR COOLANT LEVEL REFER TO THE APPROPRIATE SHOP MANUAL FOR CHECKING, DRAIN AND FILL PROCEDURE
POWER STEERING PUMP DIPSTICK FLUID SHOULD BE IN THE FULL HOT OR FULL COLD RANGE, DEPENDING ON FLUID TEMPERATURE
WINDSHIELD WASHER RESERVOIR
MAINTAIN OIL IN SAFE RANGE
BATTERY
BATTERY
COOLANT RESERVOIR BOTTLE
ENGINE OIL FILLER CAP
BRAKE MASTER CYLINDER-CHECK FLUID LEVEL
FUEL FILTER REPLACE AT RECOMMENDED INTERVAL
ADD
MAX
DO NOT ADD OIL BEYOND "MAX"
HYDRAULIC CLUTCH RESERVOIR-CHECK FLUID LEVEL WITH DIAPHRAGM REMOVED
ENGINE OIL LEVEL DIPSTICK
DON'T ADD
FUEL/WATER SEPARATOR (FRAME-MOUNTED)
COAT GASKET WITH ENGINE OIL
AIR FILTER REPLACE ELEMENT AT RECOMMENDED INTERVAL
AUTOMATIC TRANSMISSION FLUID LEVEL DIPSTICK CHECK WITH ENGINE RUNNING AND TRANSMISSION PARK
Motorcraft
FL-784
LONG LIFE OIL FILTER
FUEL/WATER SEPARATOR REMOTE DRAIN PULL CABLE (INSIDE DRIVER'S COMPARTMENT)
OIL FILTER REPLACE AT RECOMMENDED INTERVAL
Y2736-2C

FIG. 6 Engine Lubrication Points—6.9L Diesel Engine—E-250—E-350

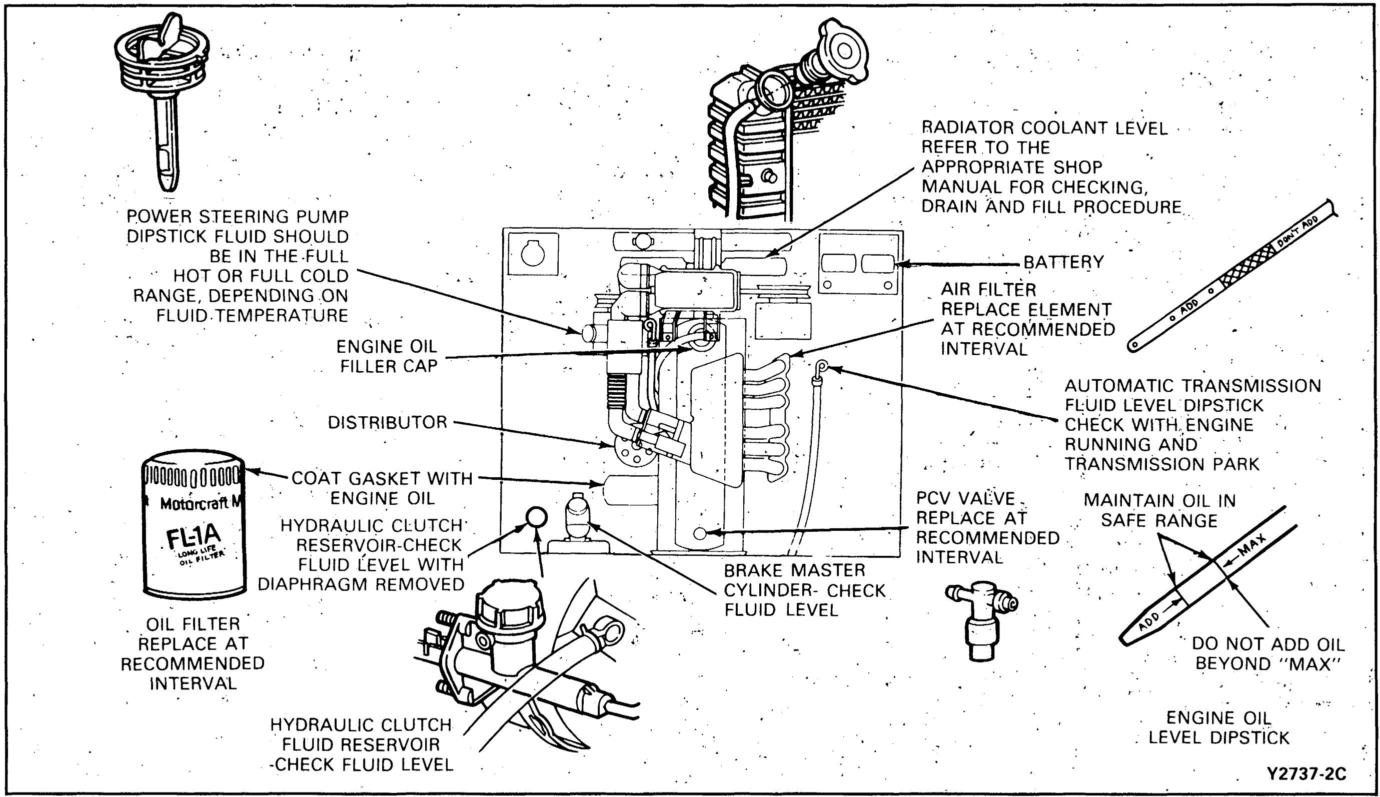

RADIATOR COOLANT LEVEL REFER TO THE APPROPRIATE SHOP MANUAL FOR CHECKING, DRAIN AND FILL PROCEDURE
POWER STEERING PUMP DIPSTICK FLUID SHOULD BE IN THE FULL HOT OR FULL COLD RANGE, DEPENDING ON FLUID TEMPERATURE
BATTERY
DON'T ADD
ADD
AIR FILTER REPLACE ELEMENT AT RECOMMENDED INTERVAL
ENGINE OIL FILLER CAP
AUTOMATIC TRANSMISSION FLUID LEVEL DIPSTICK CHECK WITH ENGINE RUNNING AND TRANSMISSION PARK
DISTRIBUTOR
Motorcraft
FL-1A
LONG LIFE OIL FILTER
COAT GASKET WITH ENGINE OIL
HYDRAULIC CLUTCH RESERVOIR-CHECK FLUID LEVEL WITH DIAPHRAGM REMOVED
PCV VALVE REPLACE AT RECOMMENDED INTERVAL
MAINTAIN OIL IN SAFE RANGE
MAX
BRAKE MASTER CYLINDER- CHECK FLUID LEVEL
OIL FILTER REPLACE AT RECOMMENDED INTERVAL
DO NOT ADD OIL BEYOND "MAX"
HYDRAULIC CLUTCH FLUID RESERVOIR -CHECK FLUID LEVEL
ENGINE OIL LEVEL DIPSTICK
Y2737-2C

FIG. 7 Engine Lubrication Points—4.9L I-6 Gasoline Engine—F-150—F-350 and Bronco

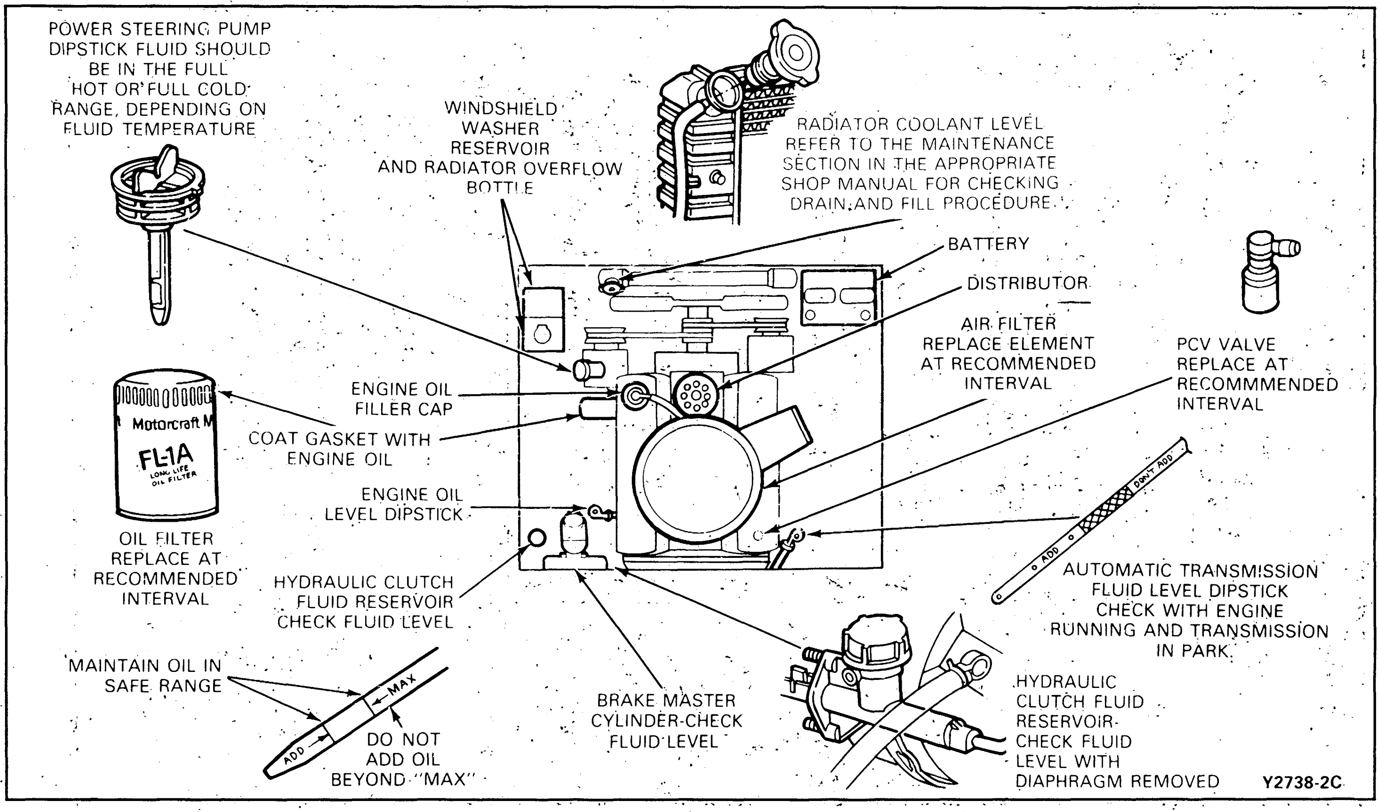

POWER STEERING PUMP DIPSTICK FLUID SHOULD BE IN THE FULL HOT OR FULL COLD RANGE, DEPENDING ON FLUID TEMPERATURE
WINDSHIELD WASHER RESERVOIR AND RADIATOR OVERFLOW BOTTLE
RADIATOR COOLANT LEVEL REFER TO THE MAINTENANCE SECTION IN THE APPROPRIATE SHOP MANUAL FOR CHECKING DRAIN AND FILL PROCEDURE
BATTERY
DISTRIBUTOR
AIR FILTER REPLACE ELEMENT AT RECOMMENDED INTERVAL
PCV VALVE REPLACE AT RECOMMMENDED INTERVAL
Motorcraft
FL-1A
LONG LIFE OIL FILTER
ENGINE OIL FILLER CAP
COAT GASKET WITH ENGINE OIL
ENGINE OIL LEVEL DIPSTICK
OIL FILTER REPLACE AT RECOMMENDED INTERVAL
HYDRAULIC CLUTCH FLUID RESERVOIR CHECK FLUID LEVEL
ADD
DON'T ADD
AUTOMATIC TRANSMISSION FLUID LEVEL DIPSTICK CHECK WITH ENGINE RUNNING AND TRANSMISSION IN PARK.
MAINTAIN OIL IN SAFE RANGE
MAX
ADD
DO NOT ADD OIL BEYOND "MAX"
BRAKE MASTER CYLINDER-CHECK FLUID LEVEL
HYDRAULIC CLUTCH FLUID RESERVOIR-CHECK FLUID LEVEL WITH DIAPHRAGM REMOVED
Y2738-2C

FIG. 8 Engine Lubrication Points—5.8L Gasoline Engines—F-150—F-350 and Bronco

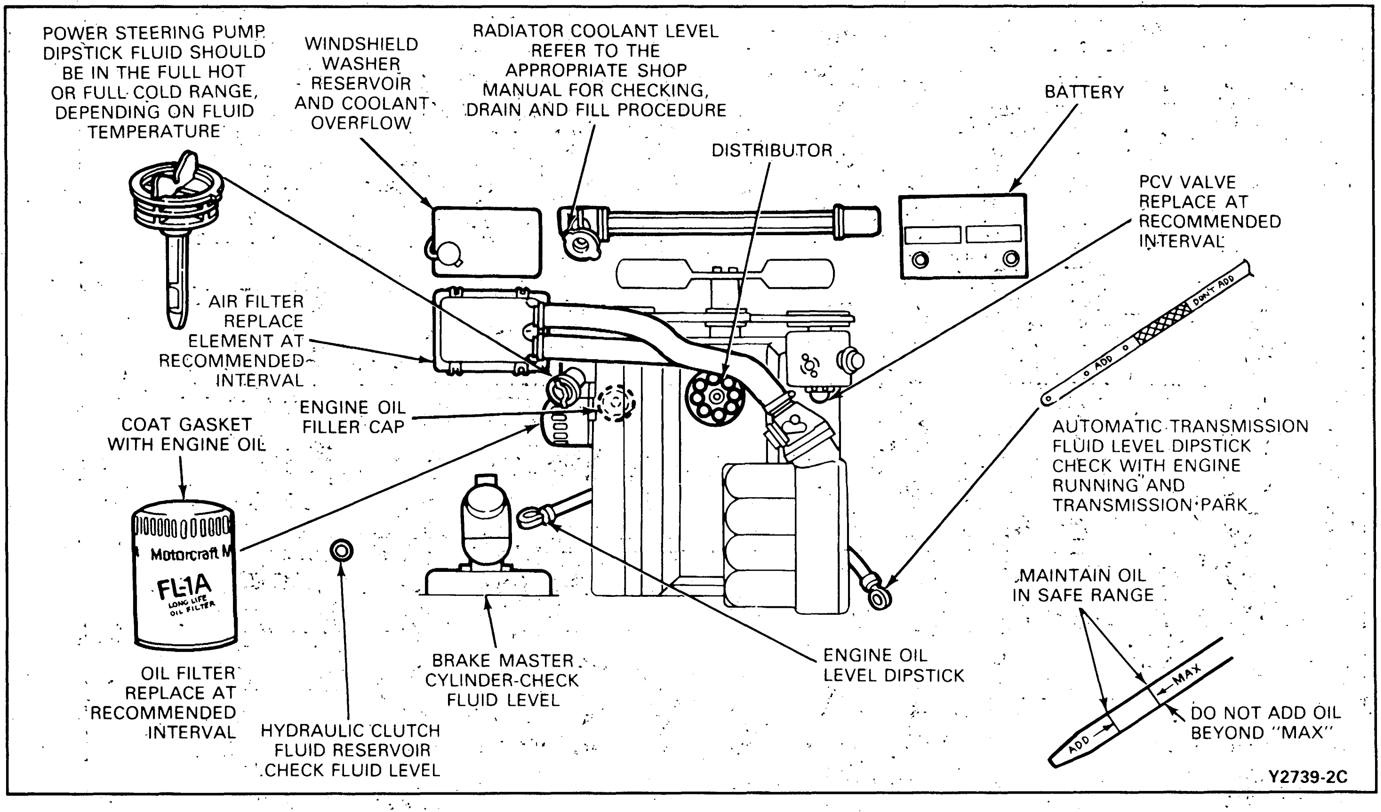

POWER STEERING PUMP DIPSTICK FLUID SHOULD BE IN THE FULL HOT OR FULL COLD RANGE, DEPENDING ON FLUID TEMPERATURE
WINDSHIELD WASHER RESERVOIR AND COOLANT OVERFLOW
RADIATOR COOLANT LEVEL REFER TO THE APPROPRIATE SHOP MANUAL FOR CHECKING, DRAIN AND FILL PROCEDURE
BATTERY
DISTRIBUTOR
PCV VALVE REPLACE AT RECOMMENDED INTERVAL
AIR FILTER REPLACE ELEMENT AT RECOMMENDED INTERVAL
ENGINE OIL FILLER CAP
COAT GASKET WITH ENGINE OIL
Motorcraft
FL-1A
LONG LIFE OIL FILTER
ADD
DON'T ADD
AUTOMATIC TRANSMISSION FLUID LEVEL DIPSTICK CHECK WITH ENGINE RUNNING AND TRANSMISSION PARK
MAINTAIN OIL IN SAFE RANGE
ENGINE OIL LEVEL DIPSTICK
BRAKE MASTER CYLINDER-CHECK FLUID LEVEL
OIL FILTER REPLACE AT RECOMMENDED INTERVAL
HYDRAULIC CLUTCH FLUID RESERVOIR CHECK FLUID LEVEL
MAX
ADD
DO NOT ADD OIL BEYOND "MAX"
Y2739-2C

FIG. 9 Engine Lubrication Points—5.0L EFI Engine—F-Series and Bronco

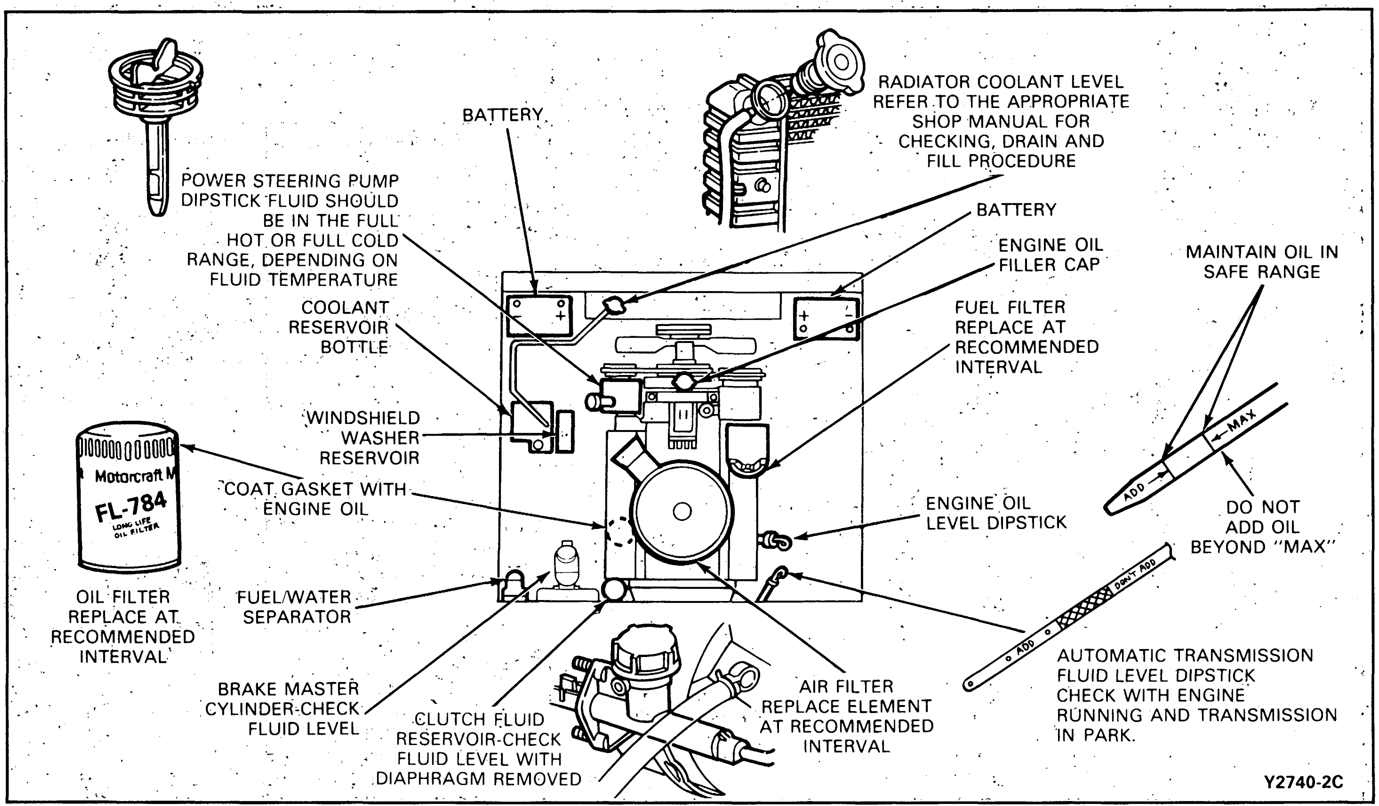

POWER STEERING PUMP DIPSTICK FLUID SHOULD BE IN THE FULL HOT OR FULL COLD RANGE, DEPENDING ON FLUID TEMPERATURE
BATTERY
RADIATOR COOLANT LEVEL REFER TO THE APPROPRIATE SHOP MANUAL FOR CHECKING, DRAIN AND FILL PROCEDURE
BATTERY
ENGINE OIL FILLER CAP
MAINTAIN OIL IN SAFE RANGE
COOLANT RESERVOIR BOTTLE
FUEL FILTER REPLACE AT RECOMMENDED INTERVAL
WINDSHIELD WASHER RESERVOIR
Motorcraft
FL-784
LONG LIFE OIL FILTER
COAT GASKET WITH ENGINE OIL
ADD
MAX
ENGINE OIL LEVEL DIPSTICK
DO NOT ADD OIL BEYOND "MAX"
OIL FILTER REPLACE AT RECOMMENDED INTERVAL
FUEL/WATER SEPARATOR
ADD
DON'T ADD
AUTOMATIC TRANSMISSION FLUID LEVEL DIPSTICK CHECK WITH ENGINE RUNNING AND TRANSMISSION IN PARK.
BRAKE MASTER CYLINDER-CHECK FLUID LEVEL
CLUTCH FLUID RESERVOIR-CHECK FLUID LEVEL WITH DIAPHRAGM REMOVED
AIR FILTER REPLACE ELEMENT AT RECOMMENDED INTERVAL
Y2740-2C

FIG. 10 Engine Lubrication Points—6.9L Diesel Engine—F-250 HD—F-350

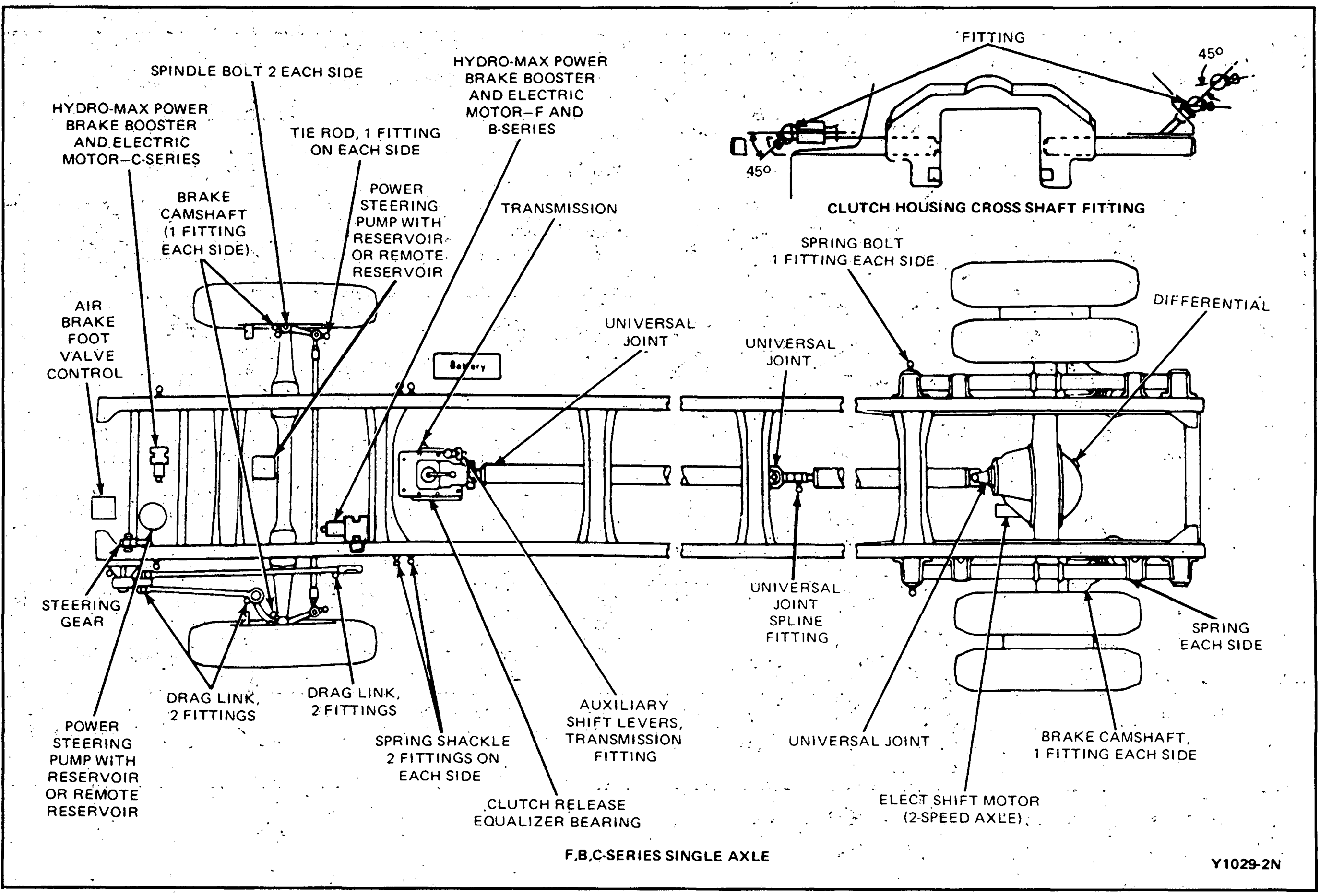

SPINDLE BOLT 2 EACH SIDE
HYDRO-MAX POWER BRAKE BOOSTER AND ELECTRIC MOTOR—F AND B-SERIES
HYDRO-MAX POWER BRAKE BOOSTER AND ELECTRIC MOTOR—C-SERIES
TIE ROD, 1 FITTING ON EACH SIDE
FITTING
45°
45°
CLUTCH HOUSING CROSS SHAFT FITTING
BRAKE CAMSHAFT (1 FITTING EACH SIDE)
POWER STEERING PUMP WITH RESERVOIR OR REMOTE RESERVOIR
TRANSMISSION
SPRING BOLT 1 FITTING EACH SIDE
DIFFERENTIAL
AIR BRAKE FOOT VALVE CONTROL
Battery
UNIVERSAL JOINT
UNIVERSAL JOINT
STEERING GEAR
UNIVERSAL JOINT SPLINE FITTING
SPRING EACH SIDE
DRAG LINK, 2 FITTINGS
DRAG LINK, 2 FITTINGS
AUXILIARY SHIFT LEVERS, TRANSMISSION FITTING
POWER STEERING PUMP WITH RESERVOIR OR REMOTE RESERVOIR
SPRING SHACKLE 2 FITTINGS ON EACH SIDE
UNIVERSAL JOINT
BRAKE CAMSHAFT, 1 FITTING EACH SIDE
CLUTCH RELEASE EQUALIZER BEARING
ELECT SHIFT MOTOR (2-SPEED AXLE)
F,B,C-SERIES SINGLE AXLE
Y1029-2N

FIG. 11 Chassis Lubrication Points—600/800 Series Truck

SPECIFICATIONS

LUBRICANT SPECIFICATIONS — E-150 — E-250 — E-350, F-150 — F-250 — F-350 AND BRONCO

Item	Ford Part Name	Ford Part Number	Ford Specification
Windshield Washer Reservoir	Ultra-Clear Windshield Washer Solvent	C9AZ-19550-A or B	ESR-M17P5-A
Body Hinges, Latches, Door Striker Plates and Rotor, Seat Tracks, Door Tracks and Checks, Hood Latch and Auxiliary Latch, Spare Tire Carrier Latch	Polyethylene Grease	D7AZ-19584-A	ESR-M1C159-A
Lock Cylinders, Outside Spare Tire Lock	Lock Lubricant	D8AZ-19587-A	ESB-M2C20-A
Front Axle Spindle Pins, Front and Rear Spring Shackle Pins, Steering Column U-Joints, Clutch Linkage Fittings, Universal Joints, Joints with Zerk Fittings, and Slip Yoke Pivots, Parking Brake Linkage Pivots and Clevises, Transmission Control Linkage Pivots	Multi-Purpose Long-Life Lubricant	C1AZ-19590-B	ESA-M1C75-B
Front Wheel Bearings and Rear Wheel Bearings (F-350, E-350) Brake and Clutch Pedal Shaft, Front Drive Axle, Spindle Needle Bearings	Multi-Purpose Long-Life Lubricant	C1AZ-19590-B	ESA-M1C75-B
Steering Gear (Manual) Housing	Steering Gear Grease	C3AZ-19578-A	ESW-M1C87-A
Power Steering Reservoir	Motorcraft Auto. Trans. Fluid-Type "F"	XT-1-QF	ESW-M2C33-F
Clutch Release Lever at Pivots	Multi-Purpose Long-Life Lubricant	C1AZ-19590-B	ESA-M1C75-B
Engine Oil — All Gasoline Engines	Motorcraft Motor Oil 5W30 and 10W40 Super Premium 10W30 and 20W40 Premium SAE-30 and 15W40 Super Duty	XO-5W30-QSP XO-10W40-QSP XO-10W30-QP XO-20W40-QP XO-30-QSD XO-15W40-QSD	ESE-M2C153-C and API SF or SF/CC or SF/CD
Engine Oil — Diesel② (Consult respective engine owners guide for recommendations)	Motorcraft Motor Oil 15W40 Super Duty SAE-30 Super Duty	XO-15W40-QSD XO-30-QSD	API SF/CD and ESE-M2C153-C
Engine Oil Filter — Diesel	Oil Filter	E3TZ-6731-A (FL-784)	—
Engine Oil Filter — Gasoline	Motorcraft Long Life Oil Filter	D9AZ-6731-A (FL-1A)	ES-E1ZE-6714-AA
C6 and AOD Automatic Transmission	Automatic Transmission Fluid	XT-4-H	ESP-M2C166-H
Accelerator Control Kickdown (Automatic 6 Cyl.)	Multi-Purpose Long-Life Lubricant	C1AZ-19590-B	ESA-M1C75-B
Speedometer, Parking Brake Cable	Speedometer Cable Lubricant	D2AZ-19581-A	ESF-M1C160-A
Steering Linkage — Lubricate only where equipped with grease fittings	Multi-Purpose Long-Life Lubricant	C1AZ-19590-A	ESA-M1C75-B
Accelerator Linkage — Ball Socket	Multi-Purpose Long-Life Lubricant	C1AZ-19590-B	ESA-M1C75-B
Ford Axles (Conventional and Limited-Slip) ①	Hypoid Gear Lubricant	E0AZ-19580-A	ESP-M2C154-A
Transfer Case — Four-Wheel Drive	Motorcraft DEXRON®-II Automatic Transmission Fluid	XT-2-QDX	DEXRON®-II
Front and/or Rear Dana Axles and Dana Limited Slip Rear Axles ①	Hypoid Gear Lubricant	C6AZ-19580-E	ESW-M2C105-A
3-Speed, 4-Speed Manual Transmission and 4 Speed Overdrive Transmission — Ford	Standard Transmission Lube	D8DZ-19C547-A	ESP-M2C83-C
Automatic Transmission Shift Linkage	Polyethylene Grease	D7AZ-19584-A	ESA-M1C159-A
Transmission Throttle Valve (TV) Lever — AOD Only Transmission Kickdown Lever C6 (EFI Engines)	Multi-Purpose Long-Life Lubricant	C1AZ-19590-A	ESA-M1C75-B
Disc Brake, Caliper Rails	Disc Brake Caliper Slide Grease	D7AZ-19590-A	ESA-M1C172-A

① Add EST-M2C118-A (Friction Modifier Part No. C8AZ-19B546-A) or equivalent to refill Ford and Dana limited slip axles.

② For arctic winter operation below −25°C (−10°F) but not above −7°C (20°F), use engine oil SAE 5W-30 or SF/CD.

CY2439-2F

LUBRICANT SPECIFICATIONS — E-150 — E-250 — E-350, F-150 — F-250 — F-350 AND BRONCO (Cont'd.)

Item	Ford Part Name	Ford Part Number	Ford Specification
Hydraulic Brake Master Cylinder — Hydraulic Clutch Master Cylinder③	Heavy-Duty Brake Fluid	C6AZ-19542-A or B	ESA-M6C25-A
Brake and Clutch Pedal Pivots and Clevises	Engine Oil SAE-10W	—	ESE-M2C153-C API-SF
Front Wheel Free Running Hubs on 4x4	Steering Gear Grease	C3AZ-19578-A	ESW-M1C87-A
NPG or Warner 4 Speed or 4 Speed Overdrive Manual Transmission	Standard Transmission Lube	D8DZ-19C547-A	ESP-M2C83-C
Driveshaft, Universal Joints (if equipped with fitting), Slip Yoke and Spring Stud Shackles	Multi-Purpose Long-Life Lubricant	C1AZ-19590-B	ESA-M1C75-B
Exhaust Control Valve	Rust Penetrant and Inhibitor	D7AZ-19A501-A	ESR-M99C56-A
Engine Coolant	Cooling System Fluid	E2FZ-19549-A	ESE-M97B44-A
Door Weatherstrips	Silicone Lube	C0AZ-19553-A	ESR-M13P4-A
Drive Shaft, Slip Yoke, Double Cardan Joint Center Ball	Multi-Purpose Long-Life Lubricant	C1AZ-19590-B	ESA-M1C75-B
Transfer Case Shift Linkage	Multi-Purpose Long-Life Lubricant	C1AZ-19590-B	ESA-M1C75-B
Automatic Locking Hubs — 4x4	Automatic Hublock Grease	E1TZ-19590-A	ESL-M1C193-A

③As the clutch disc wears, the fluid level in the reservoir will rise. Fluid level above the "step" is an indication of disc wear, NOT overfill.

CY2440-2F

LUBRICANT SPECIFICATIONS — MEDIUM TRUCK 600-700-7000

Item	Ford Part Name	Ford Part Number	Ford Specification
Body and Hood, Hinges and Latches, Door Checks	Polyethylene Grease	D7AZ-19584-A	ESR-M1C159-A
Lock Cylinders	Lock Lubricant	D8AZ-19587-A	ESB-M2C20-A
Distributor Advance Sleeve and Plate	Engine Oil SAE-10W	—	ESE-M2C153-B
Front Axle Spindle Pins, Steering Linkage, Front and Rear Spring Shackle Pins, Steering Column U-Joints (C-Series Only), Clutch Linkage Fittings, Universal Joints, Air Brake Foot Control Valve, Linkage, Treadle Hinge and Roller	Long Life Lube	C1AZ-19590-B	ESA-M1C75-B
Manual Steering Gear	Hypoid Gear Lubricant SAE-90 EP	E2HZ-19580-A or C2AZ-19580-F	ESW-M2C28-BA
Power Steering	Motorcraft DEXRON®-II Automatic Transmission Fluid	XT-2-QDX	DEXRON®-II
Brake Master Cylinder	Heavy Duty Brake Fluid	C6AZ-19542-A or B	ESA-M6C25-A
Hydraulic Clutch Master Cylinder	Heavy Duty Brake Fluid	C6AZ-19542-A or B	ESA-M6C25-A
Hydro-Max Booster/Parking Brake Reservoir	Motorcraft DEXRON®-II Automatic Transmission Fluid	XT-2-QDX	DEXRON®-II
Hydro-Max Booster/Parking Brake Reservoir — Ambients Below 0°F	—	—	Exxon Univis J-26
90° Speedometer or Tachometer Adapter with Lube Fitting	Polyethylene Grease	D0AZ-19584-A	ESR-M1C159-A
Hydro-Max Brake Master Cylinder	Heavy Duty Brake Fluid	C6AZ-19542-A or B	ESA-M6C25-A
Radiator Shutter Blade Pivots and Pivot Arms, Spring Leaves, Transmission Linkage Pivots, Accelerator Ball Sockets, Brake and Clutch Pedal Pivots and Clevises	Engine Oil SAE-10W	—	ESE-M2C153-B
Front and Rear Wheel Bearings	Multi-Purpose Long Life Lube	C1AZ-19590-B	ESA-M1C75-B
Allison Automatic Transmission	Motorcraft DEXRON®-II Automatic Transmission Fluid	XT-2-QDX	DEXRON®-II
Speedometer Parking Brake and Tachometer Cables	Speedometer Cable Grease	D2AZ-19581-A	ESF-M1C180-A
45° and 90° Speedometer and Tachometer Adapters with Lube Fittings	Polyethylene Grease	D0AZ-19584-A	ESR-M1C159-A
Engine Oil Filter (Spin On — Gasoline Engines)	Motorcraft Oil Filter (370-429 Eng.)	FL-299 E3HZ-6731-B	ES-E3TE-6714-AB
Front Wheel Bearings (Oil Filled Only)	Rear Axle Lubricant	C6AZ-19580-E or C2AZ-19580-F	ESW-M2C105-A or ESW-M2C28-BA
Radiator Coolant	Ford Cooling System Fluid	E2FZ-19549-A	ESE-M97B44-A
Accelerator Linkage & Starting Motor	SAE-10W Oil	—	ESE-M2C153-B
Rear Axle	Rear Axle Lubricant	C6AZ-19580-E or C2AZ-19580-F	ESW-M2C105-A or ESW-M2C28-BA
Manual Shift, Main and Auxiliary Transmissions	Engine Oil SAE-50 — Above 0°F (−18°C) Motorcraft Single Weight SAE 30 Motor Oil Below 0°F (−18°C)	— XO-30-Q	ESE-M2C153-C ESE-M2C153-C
Transmission Remote Gearshift Levers, Auxiliary Transmission Linkage and Transmission Cables, U-Joints, Crank Arm and Side Bushing (C-Series Only)	Long Life Lubricant	C1AZ-19590-B	ESA-M1C75-B
Transmission Remote Gearshift, Front Cross Shaft Tube (C-Series Only)	Long Life Lubricant	C1AZ-19590-B	ESA-M1C75-B
Two-Speed Axle Shift Unit	Engine Oil SAE-10W — Above 0°F (−18°C) 3 Parts SAE-10W Oil to 1 Part Kerosene — Below 0°F (−18°C)	— — —	ESE-M2C153-C —
Driveshaft Slip Spline and Clutch Release Bearing Hub	Long Life Lubricant	C1AZ-19590-B	ESA-M1C75-B
Driveshaft, Universal Joints (if equipped with fitting), Slip Spline and Spring Stud Shackles	Multi-Purpose Long Life Lubricant	C1AZ-19590-B	ESA-M1C75-B
Engine Oil — Gasoline Engines	Motorcraft Motor Oil 10W40 Super Premium 10W30 and 20W40 Premium 15W-40 and SAE30 Super Dry	XO-10W40-QSP XO-10W30-QP XO-20W40-QP XO-15W40-QSD XO-30-QSD	ESE-M2C153-C and API Category SF, SF/CC or SF/CD
Engine Oil — Diesel Engines Refer to Respective Engine Operator's Manual	10W30 and 20W40 Premium 5W30 Super Premium	XO-10W30-QP XO-20W40-QP XO-5W30-QSP	ESE-M2C153-C and API Categories SF/CC
	15W-40 and 30 Weight Super Duty	XO-15W40-QSD XO-30-QSD	ESE-M2C153-C and API Categories SF/CD
Transmission Shift Lever Pivot and Crank Arm In Front Linkage (C-Series)	Multi-Purpose Long-Life Lubricant	C1AZ-19590-B	ESA-M1C75-B
Door Weatherstrip	Silicone Lube	C0AZ-19553-A	ESR-M13P4-A

CY2741-2C

SECTION 50-04 Hoisting and Jacking

SUBJECT	PAGE
LIGHT TRUCKS	
Aerostar	50-04-1
Bronco, E-150—E-250—E-350, F-150—F-250—F-350	50-04-4
Ranger/Bronco II	50-04-5
MEDIUM/HEAVY TRUCKS	
Cargo	50-04-6
F-, B-, C-600—8000 Series	50-04-6
L-Series	50-04-6
VEHICLE APPLICATION	50-04-1

VEHICLE APPLICATION

All Truck Models.

LIGHT TRUCKS

Aerostar

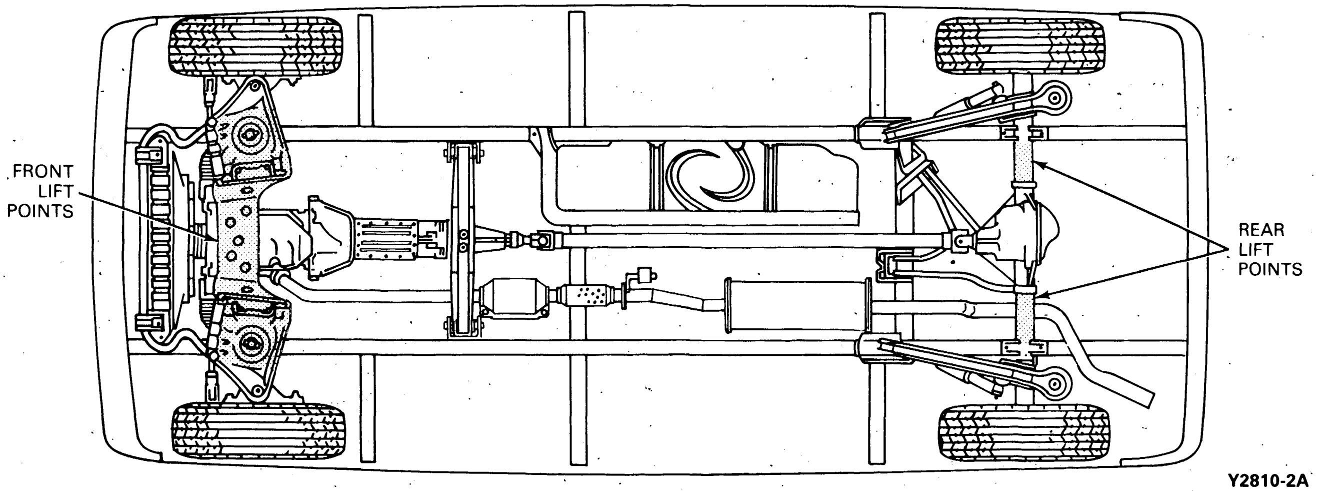
HOISTING

Twin Post Hoist

Damage to suspension, rear axle cover and/or steering linkage components may occur when positioning hoist adapters. Front adapter pads should be positioned carefully to ensure maximum contact under the center of lower suspension arms or spring supports as near wheels as practical. Rear suspension hoist adapters (forks) should be placed under rear axle tubes, but adapters must not interfere with lower control arm mounting brackets or hydraulic brake tubes.

When raising a vehicle on twin post hoist, care should be taken to position the vehicle so that the hoisting forks do not damage the axle carrier casting rear cover, or contact the front stabilizer bar and/or brackets.

HOIST LIFT POINTS - TWIN POST HOIST

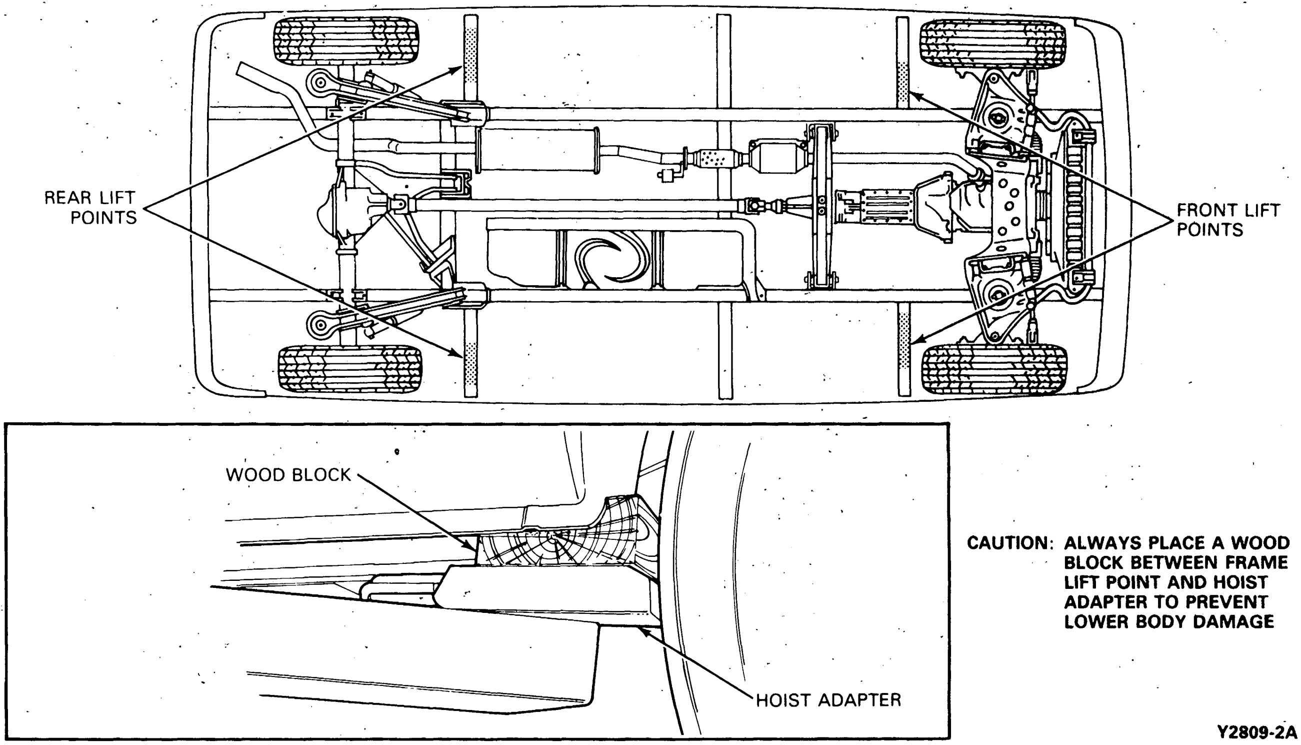


LIGHT TRUCKS (Continued)

Single Post Hoist

When raising a vehicle on a single post hoist, place a wood block between the frame lift point and hoist adapter. This ensures adequate clearance to prevent damaging the lower body.

HOIST LIFT POINTS - SINGLE POST HOIST



CAUTION: ALWAYS PLACE A WOOD BLOCK BETWEEN FRAME LIFT POINT AND HOIST ADAPTER TO PREVENT LOWER BODY DAMAGE

Y2809-2A

LIGHT TRUCKS (Continued)

JACKING

When lifting a vehicle with the vehicle jack or any floor jack, block the diagonally opposite wheel to prevent vehicle from moving.

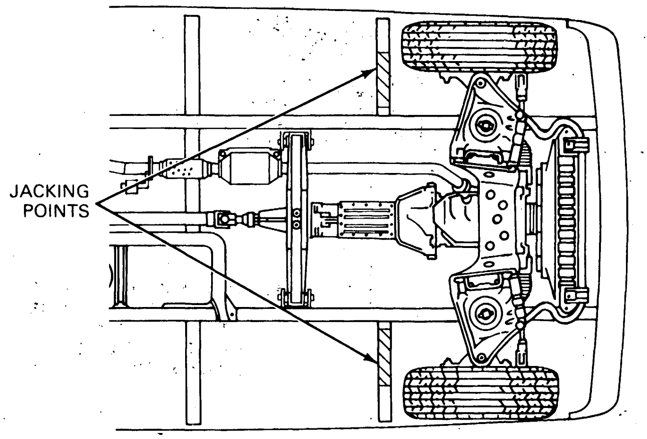
CAUTION: On vehicles equipped with an under chassis mounted spare tire, remove the tire, wheel or tire carrier from the vehicle before it is placed in a high lift position in order to avoid sudden weight release from the chassis.

Position floor jacks under axles, or under the frame lift points provided as close to the wheels as possible. Refer to the jacking decal and vehicle owner's guide.

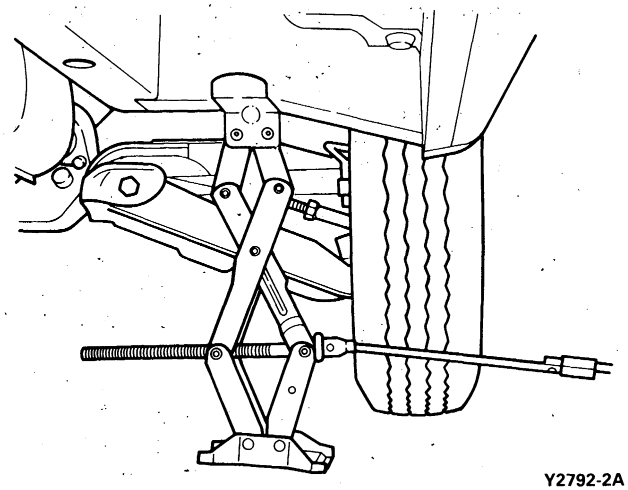
Position the scissors-type emergency jack as shown in the following illustrations.

WARNING: DO NOT PUT ANY PORTION OF YOUR BODY UNDER THE VEHICLE WHILE THE VEHICLE IS SUPPORTED ON THE SCISSORS TYPE JACK PROVIDED WITH THE VEHICLE. THE JACK IS PROVIDED FOR EMERGENCY WHEEL AND TIRE CHANGING ONLY. IF THE VEHICLE IS TO BE SERVICED, SUPPORT THE VEHICLE ON JACK STANDS. NEVER START THE ENGINE WHILE THE VEHICLE IS SUPPORTED ON THE JACK.

FRONT JACKING POINTS



JACKING FRONT OF VEHICLE



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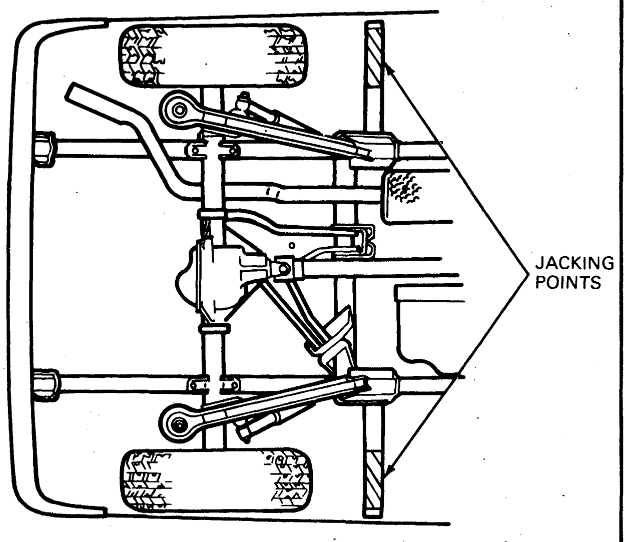
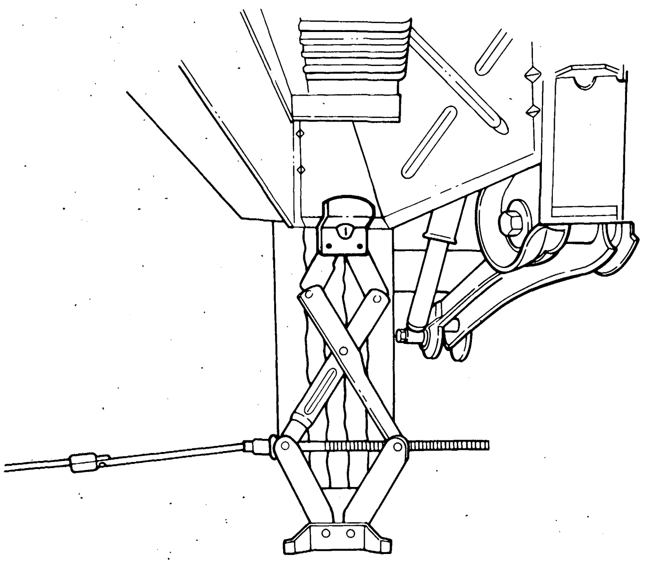
REAR JACKING POINTS



JACKING REAR OF VEHICLE



Y2793-2A

LIGHT TRUCKS (Continued)

Bronco, E-150—E-250—E-350, F-150—F-250—F-350

HOISTING

Damage to suspension and/or steering linkage components may occur when positioning hoist adapters. Front adapter (pads) should be positioned carefully to ensure maximum contact under the center of lower suspension arms or spring supports as near wheels as practical. Rear suspension hoist adapters (forks) should be placed under spring mounting pads or rear axle housing, but adapters must not interfere with shock absorber mounting brackets.

When raising a vehicle on a twin post hoist, care should be taken to position the vehicle so that the hoisting forks do not damage the axle carrier casting or rear cover.

JACKING

CAUTION: The service jack, provided with the vehicle, is only intended to be used in an emergency for changing a deflated tire. Never use the service jack to raise the vehicle for any other service.

CAUTION: On vehicles equipped with a limited-slip differential, do not run the engine with the vehicle on a jack.

When lifting a vehicle with the vehicle jack or any floor jack, block the diagonally opposite wheel to prevent vehicle from moving.

CAUTION: On vehicles equipped with an under chassis mounted spare tire, remove the tire, wheel or tire carrier from the vehicle before it is placed in a high lift position in order to avoid sudden weight release from the chassis.

On Bronco, E-150—E-350 and F-150—F-350, position vehicle and floor jacks under axles, radius arms or spring hangers as close to the wheels as possible and as recommended in the vehicle owner's manual.

To raise heavy vehicles with floor jacks, follow the jack manufacturer's recommendations for placement of jack. Do not exceed the rated lift capacity of any jack.

LIGHT TRUCKS (Continued)

Ranger/Bronco II

HOISTING

Damage to suspension and/or steering linkage components may occur when positioning hoist adapters. Front adapter (pads) should be positioned carefully to ensure maximum contact under the center of lower suspension arms or spring supports as near wheels as practical. Rear suspension hoist adapters (forks) should be placed under spring mounting pads or rear axle housing, but adapters must not interfere with shock absorber mounting brackets or stabilizer bar mounting brackets.

When raising a vehicle on twin post hoist, care should be taken to position the vehicle so that the hoisting forks do not damage the axle carrier casting rear cover, or contact the front stabilizer bar and/or brackets.

JACKING

CAUTION: The service jack provided with the vehicle is intended to be used in an emergency for changing a deflated tire only. Never use this service jack to raise the vehicle for any other service.

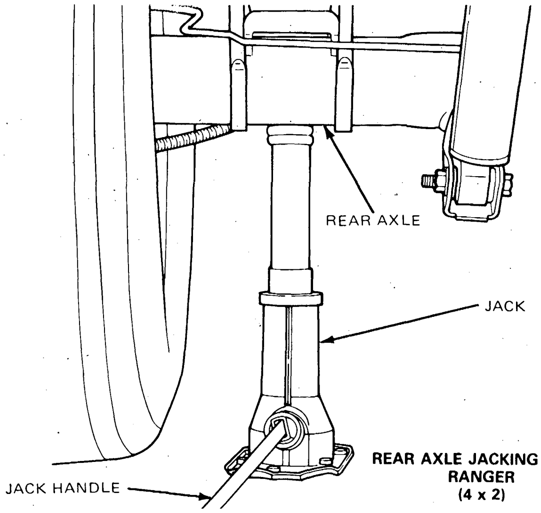
CAUTION: On vehicles equipped with a limited-slip differential, do not run the engine with the vehicle on the jack.

When lifting a vehicle with the vehicle jack or any floor jack, block the diagonally opposite wheel to prevent vehicle from moving.

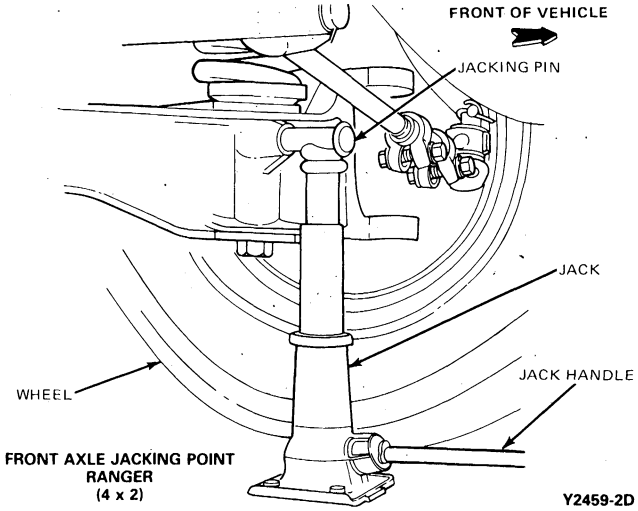
CAUTION: On vehicles equipped with an under chassis mounted spare tire, remove the tire, wheel or tire carrier from the vehicle before it is placed in a high lift position in order to avoid sudden weight release from the chassis.

Position floor jacks under axles, shock absorber or jacking bracket as close to the wheels as possible and as recommended in the vehicle owner's manual.

NOTE: On 4x2 vehicles a special jacking pin is provided on the front axle for jacking the front of the vehicle using the vehicle jack. This pin should only be used with the factory supplied vehicle jack or a jack whose shaft end cap fits in the bracket as shown. A jack which is not positioned as shown may slip off the pin during jacking.

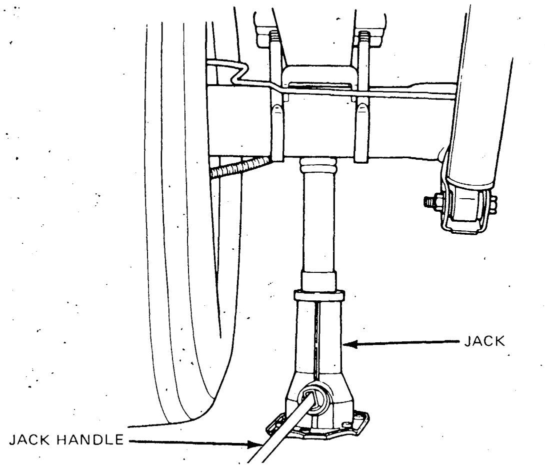


REAR AXLE JACKING POINT RANGER (4 x 2)

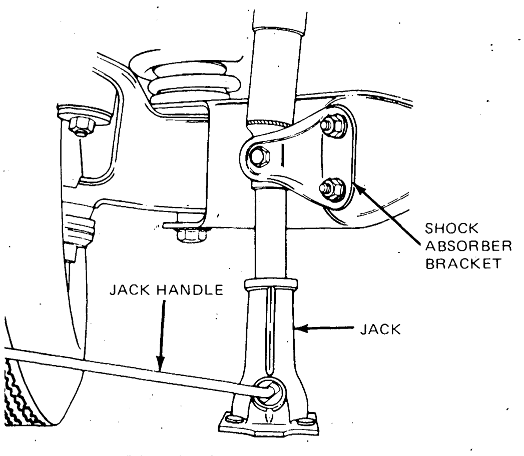


FRONT AXLE JACKING POINT RANGER (4 x 2)

Y2459-2D



REAR AXLE JACKING POINT



FRONT AXLE JACKING POINT

Y2596-2B

MEDIUM/HEAVY TRUCKS

F-, B-, C-600—8000 Series

Hoist adapters for heavy duty hoists should be positioned according to the hoist manufacturer's recommendations. Be sure the hoist has an adequate lifting capacity for the vehicle being lifted.

L-Series

HOISTING

Hoist adapters for heavy duty hoists should be positioned according to the hoist manufacturer's recommendations. Be sure the hoist has an adequate lifting capacity for the vehicle being lifted.

JACKING

When lifting a vehicle with the vehicle jack or any floor jack, block the diagonally opposite wheel to prevent vehicle from moving.

To raise vehicles with floor jacks, follow the jack manufacturer's recommendations for placement of jack. Do not exceed the rated lift capacity of any jack.

Cargo

HOISTING

Damage to suspension and/or steering linkage components may occur when positioning hoist adapters. Front adapter (pads) should be positioned carefully to ensure maximum contact under the center of lower suspension arms or spring supports as near wheels as practical. Rear suspension hoist adapters (forks) should be placed under spring mounting pads or rear axle housing, but adapters must not interfere with shock absorber mounting brackets.

When raising a vehicle on a twin post hoist, care should be taken to position the vehicle so that the hoisting forks do not damage the axle carrier casting or rear cover.

Hoist adapters for heavy duty hoists should be positioned according to the hoist manufacturer's recommendations. Be sure the hoist has an adequate lifting capacity for the vehicle being lifted.

JACKING

When lifting a vehicle with the vehicle jack or any floor jack, block the diagonally opposite wheel to prevent vehicle from moving.

CAUTION: On vehicles equipped with an under chassis-mounted spare tire, remove the tire, wheel, or tire carrier from the vehicle before it is placed in a high lift position in order to avoid sudden weight release from the chassis.

Position vehicle and floor jacks under axles or spring hangers as close to the wheels as possible, as recommended in the vehicle owner's manual.

To raise heavy vehicles with floor jacks, follow the jack manufacturer's recommendations for placement of jack. Do not exceed the rated lift capacity of any jack.

METRICS

SUBJECT	PAGE
Decimal/Metric Equivalents Chart	4
English/Metric Conversion Chart	5
Introduction	1
Nomenclature for Bolts	2

SUBJECT	PAGE
Strength Identification	
Bolts	2
Hex Nuts	3
Studs	3
Tapping Screws	3
Thread Forming Screws	3
U-Nuts	3
Torque Conversion Chart	6

INTRODUCTION

Most threaded fasteners are covered by specifications that define required mechanical properties, such as tensile strength, yield strength, proof load and hardness. These specifications are carefully considered in initial selection of fasteners for a given application. To assure continued satisfactory vehicle performance, replacement fasteners used should be of the correct strength, as well as the correct nominal diameter, thread pitch, length, and finish.

Most original equipment fasteners (English system or metric) are identified with markings or numbers indicating the strength of the fastener. These markings are described in the pages that follow. Attention to these markings is important in assuring that the proper replacement fasteners are used.

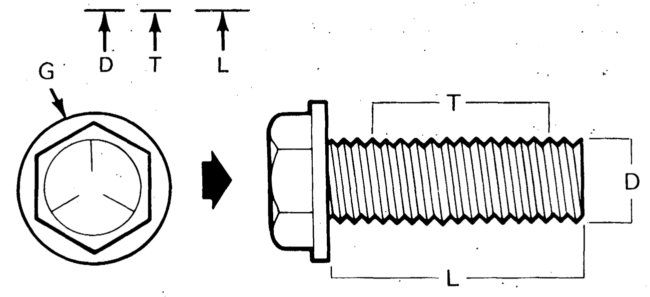
Further, some metric fasteners, especially nuts, are colored blue. This metric blue identification is in most cases a temporary aid for production start-up, and color will generally revert to normal black or bright after start-up.

English system and metric system fasteners are available through your Ford Parts and Service operation.

NOMENCLATURE FOR BOLTS

(ENGLISH) INCH SYSTEM

Bolt, 1/2-13x1.25



D- Nominal Diameter (inches)

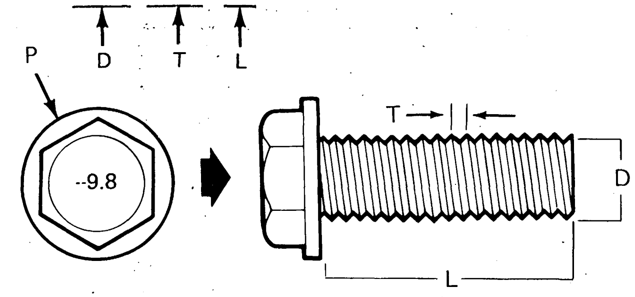
L- Length, (inches)**

G- Grade Marking (bolt strength)

T- Thread Pitch (thread/inch)

METRIC SYSTEM

Bolt M12-1.75x25



D- Nominal Diameter (millimeters)

P- Property Class* (bolt strength)

L- Length (millimeters)**

T- Thread Pitch (thread width crest to crest mm)

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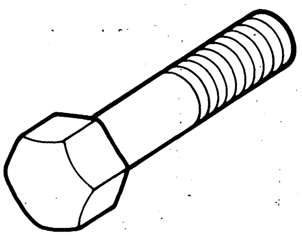
*The property class is an Arabic numeral distinguishable from the slash SAE English grade system.

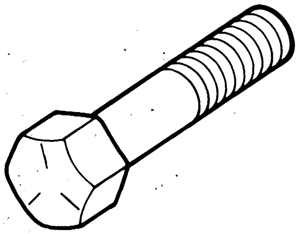
**The length of all bolts is measured from the underside of the head to the end.

BOLT STRENGTH IDENTIFICATION

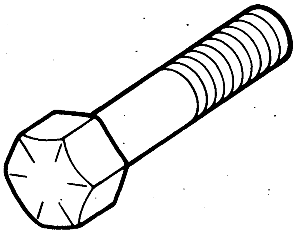
(ENGLISH) INCH SYSTEM



Grade 1 or 2



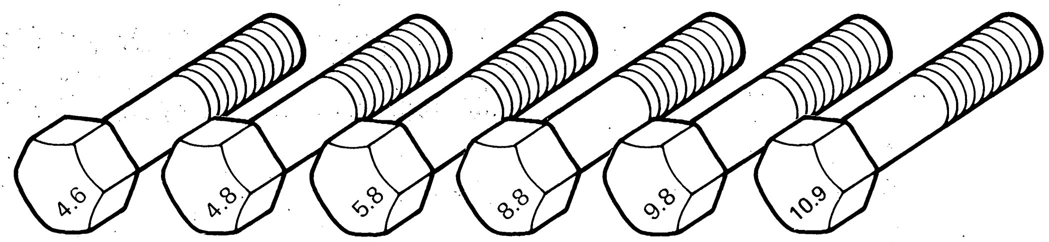
Grade 5



Grade 8

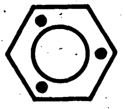
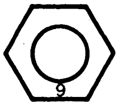
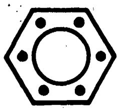
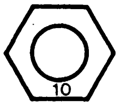
(English) Inch bolts - Identification marks correspond to bolt strength - increasing number of slashes represent increasing strength.

METRIC SYSTEM



Metric bolts — Identification class numbers correspond to bolt strength - increasing numbers represent increasing strength. Common metric fastener bolt strength properties are 9.8 and 10.9 with the class identification embossed on the bolt head.

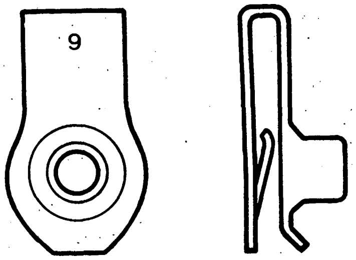
HEX NUT STRENGTH IDENTIFICATION

(ENGLISH) INCH SYSTEM		**METRIC SYSTEM**	
Grade	Identification	Class	Identification
Hex Nut Grade 5	 3 Dots	Hex Nut Property Class 9	 Arabic 9
Hex Nut Grade 8	 6 Dots	Hex Nut Property Class 10	 Arabic 10
Increasing dots represent increasing strength.		May also have blue finish or paint daub on hex flat. Increasing numbers represent increasing strength.	

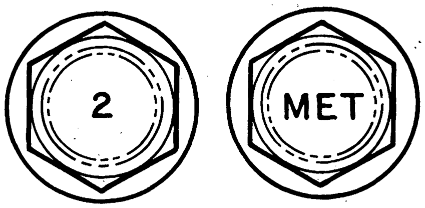
OTHER TYPES OF PARTS

Metric identification schemes vary by type of part, most often a variation of that used of bolts and nuts. Note that many types of English and metric fasteners carry no special identification if they are otherwise unique.

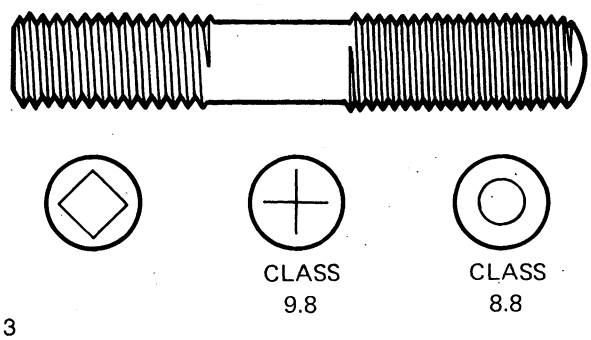
–Stamped "U" Nuts



–Tapping, thread forming and certain other case hardened screws



–Studs, Large studs may carry the property class number. Smaller studs use a geometric code on the end.



DECIMAL AND METRIC EQUIVALENTS

Fractions	Decimal In.	Metric mm.	Fractions	Decimal In.	Metric mm.
1/64	.015625	.397	33/64	.515625	13.097
1/32	.03125	.794	17/32	.53125	13.494
3/64	.046875	1.191	35/64	.546875	13.891
1/16	.0625	1.588	9/16	.5625	14.288
5/64	.078125	1.984	37/64	.578125	14.684
3/32	.09375	2.381	19/32	.59375	15.081
7/64	.109375	2.778	39/64	.609375	15.478
1/8	.125	3.175	5/8	.625	15.875
9/64	.140625	3.572	41/64	.640625	16.272
5/32	.15625	3.969	21/32	.65625	16.669
11/64	.171875	4.366	43/64	.671875	17.066
3/16	.1875	4.763	11/16	.6875	17.463
13/64	.203125	5.159	45/64	.703125	17.859
7/32	.21875	5.556	23/32	.71875	18.256
15/64	.234375	5.953	47/64	.734375	18.653
1/4	.250	6.35	3/4	.750	19.05
17/64	.265625	6.747	49/64	.765625	19.447
9/32	.28125	7.144	25/32	.78125	19.844
19/64	.296875	7.54	51/64	.796875	20.241
5/16	.3125	7.938	13/16	.8125	20.638
21/64	.328125	8.334	53/64	.828125	21.034
11/32	.34375	8.731	27/32	.84375	21.431
23/64	.359375	9.128	55/64	.859375	21.828
3/8	.375	9.525	7/8	.875	22.225
25/64	.390625	9.922	57/64	.890625	22.622
13/32	.40625	10.319	29/32	.90625	23.019
27/64	.421875	10.716	59/64	.921875	23.416
7/16	.4375	11.113	15/16	.9375	23.813
29/64	.453125	11.509	61/64	.953125	24.209
15/32	.46875	11.906	31/32	.96875	24.606
31/64	.484375	12.303	63/64	.984375	25.003
1/2	.500	12.7	1	1.00	25.4

ENGLISH METRIC CONVERSION

	multiply	by	for equiv. no. of:
ACCELERATION	Foot/sec^2	0.304 8	meter/sec^2 (m/s^2)
	Inch/sec^2	0.025 4	meter/sec^2
TORQUE	Pound-inch	0.112 98	newton-meters (N·m)
	Pound-foot	1.355 8	newton-meters
POWER	horsepower	0.746	kilowatts (kw)
PRESSURE or STRESS	inches of water	0.249 1	kilopascals (kPa)
	pounds/sq. in.	6.895	kilopascals (kPa)
ENERGY or WORK	BTU	1 055.	joules (J)
	foot-pound	1.355 8	joules (J)
	kilowatt-hour	3 600 000. or 3.6 x 10^6	joules (J=one W's)
LIGHT	foot candle	10.76	lumens/meter^2 (lm/m^2)
FUEL PERFORMANCE	miles/gal	0.425 1	kilometers/liter (km/l)
	gal/mile	2.352 7	liters/kilometer (l/km)
VELOCITY	miles/hour	1.609 3	kilometer/hr. (km/h)
LENGTH	inch	25.4	millimeters (mm)
	foot	0.304 8	meters (m)
	yard	0.914 4	meters
	mile	1.609	kilometers (km)
AREA	inch^2	645.2	millimeters^2 (mm^2)
		6.45	centimeters^2 (cm^2)
	foot^2	0.092 9	meters^2 (m^2)
	yard^2	0.836 1	meters^2
VOLUME	inch^3	16 387.	mm^3
		16.387	cm^3
	quart	0.016 4	liters(1)
	quart	0.946 4	liters
	gallon	3.785 4	liters
	yard^3	0.764 6	meters^3 (m^3)
MASS	pound	0.453 6	kilograms (kg)
	ton	907.18	kilograms (kg)
	ton	0.907	tonne (t)
FORCE	kilogram	9.807	newtons (N)
	ounce	0.278 0	newtons
	pound	4.448	newtons
TEMPERATURE	degree farenheit	(1°F 32) 1.8	degree Celsius

TORQUE CONVERSION

NEWTON METERS (N·m)	POUND-FEET (LB.-FT.)
1	0.7376
2	1.5
3	2.2
4	3.0
5	3.7
6	4.4
7	5.2
8	5.9
9	6.6
10	7.4
15	11.1
20	14.8
25	18.4
30	22.1
35	25.8
40	29.5
50	36.9
60	44.3
70	51.6
80	59.0
90	66.4
100	73.8
110	81.1
120	88.5
130	95.9
140	103.3
150	110.6
160	118.0
170	125.4
180	132.8
190	140.1
200	147.5
225	166.0
250	184.4

POUND-FEET (LB.-FT.)	NEWTON METERS (N·m)
1	1.356
2	2.7
3	4.0
4	5.4
5	6.8
6	8.1
7	9.5
8	10.8
9	12.2
10	13.6
15	20.3
20	27.1
25	33.9
30	40.7
35	47.5
40	54.2
45	61.0
50	67.8
55	74.6
60	81.4
65	88.1
70	94.9
75	101.7
80	108.5
90	122.0
100	135.6
110	149.1
120	162.7
130	176.3
140	189.8
150	203.4
160	216.9
170	230.5
180	244.0

GLOSSARY OF TERMS

EMISSIONS RELATED COMPONENTS

ACCELERATOR SWITCH (Courier) — Located on accelerator pedal. Activates anti-afterburn valve to reduce rich mixture on deceleration.

A/CL BI MET (AIR CLEANER BI-METAL SENSOR).

A/CL CWM — See CWM.

A/CL DV (AIR CLEANER DUCT AND VALVE VACUUM MOTOR).

ACT (AIR CHARGE TEMPERATURE SENSOR) — Air Charge Temperature Sensor or its signal line. Thermistor Sensor can be located in intake manifold (EFI Systems) or Air Cleaner.

ACTIVE CIRCUIT — A circuit consisting of some active (semiconductor) elements.

AIR BPV — See BPV.

ACV (AIR CONTROL VALVE) — A vacuum controlled valve in the Thermactor system which diverts air pump air to either the upstream (exhaust manifold) or downstream (underbody catalyst) air injection points as required.

AFTERGLOW — The period of time the glow plug system on a diesel engine remains on after the engine is started.

ALTITUDE COMPENSATING MODULATOR — Device to control transmission shift spacing and engine timing. Improves performance at higher altitudes by changing the vacuum signals.

AMBIENT TEMPERATURE — Temperature of air surrounding an object.

ANTI-AFTERBURN VALVE (Courier) — Prevents abnormal combustion in exhaust system by increasing fresh air in intake manifold on sudden deceleration. This tends to reduce vacuum and fuel flow.

ANTI-BFV (ANTI-BACKFIRE VALVE).

AUTOMOTIVE EMISSIONS — Gaseous and particulate compounds that are emitted from a car's crankcase, exhaust, carburetor, and fuel tank (hydrocarbons, nitrogen oxides, and carbon monoxide).

AXIS — A real or imaginary straight line on which an object rotates or is regarded as rotating.

BHS (BIMETAL HEAT SENSOR) — A unit using a metallic part consisting of 2 layers with different metals, to sense temperature changes. The layers expand at different rates as temperature changes, causing the part to bend in a predetermined manner, thereby causing a changing signal.

BMAP (BAROMETRIC AND MANIFOLD ABSOLUTE PRESSURE SENSOR) — Sensor housing containing both MAP and BP sensors. The barometric pressure sensor monitors atmospheric pressure and allows adjustment of spark advance, EGR flow, and air/fuel ratio as a function of altitude. The manifold absolute pressure sensor monitors engine vacuum and provides engine load information which is used to calculate spark advance, EGR flow and air/fuel ratio. See BP and MAP.

BP (BAROMETRIC PRESSURE SENSOR) — An active circuit sensor (one half of BMAP sensor) or its signal line. Sensor signal is proportional to the Barometric Pressure at the sensor location.

B/P (EGR BACK PRESSURE VALVE).

BSV (BACKFIRE SUPPRESSOR VALVE) — A device used in conjunction with the early design "Thermactor" exhaust emission system. Its primary function is to lean-out the excessively rich fuel mixture which follows closing of the throttle after acceleration. Allows additional air into the induction system whenever intake manifold vacuum increases.

BPV (BYPASS VALVE) — A vacuum controlled valve in the Thermactor system which allows air from the air pump to be injected into the exhaust system, or bypassed to atmosphere when not required; and also provides a pressure relief function to protect the air pump from high pressure. These valves may be mounted on the air pump (pump mounted) or mounted in the Thermactor hose line (remote mounted). The two basic types are: normally closed (bypasses air with no vacuum signal applied) and normally open (allows air to flow through the valve to the exhaust system with no vacuum signal applied).

BV (BOWL VENT PORT).

CALIBRATION ASSEMBLY — Refer to ECA.

CANISTER — A container, in an evaporative emission control system, that contains charcoal to trap vapors from the fuel system.

CANP (CANISTER PURGE SOLENOID) — Electrical solenoid or its control line. Solenoid opens valve from fuel vapor canister line to intake manifold when energized. Controls flow of vapors between carburetor bowl vent and carbon canister.

CATALYST — A muffler-like device located in the exhaust system where hot exhaust gas comes in contact with special metals (i.e., platinum or palladium) that promote more complete combustion of unburned hydrocarbons and reduction of carbon monoxide.

CC (CATALYTIC CONVERTER) — A muffler-like assembly placed in the exhaust system and containing a catalyst to change hydrocarbons and carbon monoxide into water vapor and carbon dioxide.

GLOSSARY OF TERMS
EMISSIONS RELATED COMPONENTS

CDR (CRANKCASE DEPRESSION REGULATOR) — A device on a diesel engine used to regulate the amount of crankcase gases admitted into the intake manifold to be burned to lower engine emissions.

CHAMFER — A beveled edge or corner.

CHECK VALVE — A one-way valve which allows a liquid or gas to flow in one direction only — prevents backflow.

CO (CARBON MONOXIDE) — A colorless, odorless gas that is a by-product of incomplete combustion of carbon. This gas is poisonous in confined spaces when it is at high concentration.

COASTING RICHER SOLENOID VALVE (Courier) — Adds additional fuel to lean mixture caused by deceleration. Controlled by speedometer switch and accelerator switch.

COC (CONVENTIONAL OXIDATION CATALYST) — Acts on two of the major pollutants: HC and CO.

COMBINATION THERMACTOR AIR BYPASS AND AIR DIVERTER VALVE — Combines the function of a normally closed air Bypass Valve and an Air Control Valve in one integral valve.

COMPUTED TIMING — Relationship of Spark Plug Firing to CP pulse, expressed in crankshaft degrees. Since CP pulse is at 10 BTDC a Computed Timing reading of 10 would be equal to a Timing reading of 20 BTDC.

CP (CRANKSHAFT POSITION SENSOR) — Permanent magnet with coil. Sensor produces AC pulse when magnetic field or sensor is disrupted by a gear tooth or notch. Senses pulse ring lobes. Resultant signal enables the ECA to determine when the ignition module should be triggered to produce a spark. Also, provides RPM information which is used to calculate spark advance and EGR flow, and air/fuel ratio, (replaces distributor centrifugal advance weights and timing pickup). One pulse is produced for each cylinder every other engine rotation (one for each spark plug firing). Example: 4 pulses are produced for each V8 engine rotation. The CP pulse is generated at 10 crankshaft degrees Before Top Dead Center (BTDC).

CP + — CP Sensor Signal line, Pin No. 18, TSS A-10.

CP- — CP Sensor return line. Connects to ground (Pin No. 8) in ECA Processor. Pin No. 2, TSS B-7.

CPRV (CANISTER PURGE REGULATOR VALVE).

CRANKSHAFT TIMING — Refer to Timing.

CRK — Cranking Signal. Battery Voltage that is switched to ECA by ignition switch during cranking (start) only. Pin No. 1, TSS A-2.

CSC (COOLANT SPARK CONTROL).

CSSA (COLD START SPARK ADVANCE SYSTEM) — Added to the distributor spark control on some engines. System momentarily traps spark port vacuum on the distributor spark advance diaphragm when engine coolant temperature is below 53°C (128°F.). Used in conjunction with a DRCV and a CSSA PVS.

CSSH (COLD START SPARK HOLD SYSTEM) — Provides improved cold engine acceleration. When engine coolant is less than 53°C (128°F.) the CSSH PVS is closed and the distributor vacuum signal travels through a restrictor proving a modified vacuum advance during the initial stage of acceleration.

CT (COMPUTED TIMING) — Relationship of Spark Plug Firing to CP pulse, expressed in crankshaft degrees. Since CP pulse is at 10 BTDC a Computed Timing reading of 10 would be equal to a Timing reading of 20 BTDC.

CTAV (COLD TEMPERATURE ACTUATED VACUUM SWITCH) — Used with MCU system to signal open loop or closed loop operating mode.

CV (CONTROL VALVE).

CWM (COLD WEATHER MODULATOR) — A vacuum modulator located in the carburetor air cleaner on some models. Prevents the air cleaner duct door from opening to non-heated intake air when fresh air is below 13°C (55°F.).

DARLINGTON — A two transistor switch with transistors connected, so that their collectors are common and gains are multiplied.

DECELERATION VALVE — See DVAC.

DMS (DISTRIBUTOR MODULATOR SYSTEM) — T/C.

DRCV (DISTRIBUTOR RETARD CONTROL VALVE) — Used on engines equipped with the CSSA cold start spark advance system. Used in combination with a CSSA PVS.

DUAL CATALYTIC CONVERTER — See TWC.

DUTY CYCLE (DC) — The measurement of the off (high voltage) time of the IMS pulse, expressed in percent.

DVAC (DISTRIBUTOR VACUUM ADVANCE CONTROL VALVE) — A device used in conjunction with the dual diaphragm vacuum advance unit to advance timing under deceleration conditions.

GLOSSARY OF TERMS

EMISSIONS RELATED COMPONENTS

DVCV — See DV/DV.

DV/DV (DIFFERENTIAL VALVE/DELAY VALVE) — Installed in series with VDV. Used to delay sudden drops in manifold vacuum as during hard acceleration. Permits instant signal when deceleration occurs.

DV-TW (DELAY VALVE-TWO WAY).

DVVV (DISTRIBUTOR VACUUM VENT VALVE) — Required by some engines to prevent fuel migration to distributor advance diaphragm and to act as a spark advance delay valve.

EARTH — Refer to Ground.

ECA (ELECTRONIC CONTROL ASSEMBLY) — A vehicle computer consisting of a calibration assembly containing the computer memory and thus its control program and a processor assembly, which is the computer hardware. The calibration assembly plugs into the processor. The processor plugs into the vehicle harness.

ECT (ENGINE COOLANT TEMPERATURE SENSOR) — Refers to thermistor sensor or its signal line. Sensor is immersed in engine coolant fluid. Provides engine coolant temperature information which is used to alter spark advance and EGR flow during warm-up or overheat conditions (replaces cooling and EGR PVS).

EDM (ELECTRONIC DISTRIBUTOR MODULATOR)

EEC (ELECTRONIC ENGINE CONTROL) — A computer directed system of engine control. EEC-I—Control of engine timing. EEC-II—Control of engine timing and fuel (with FBC system). EEC-III—FBC-descendent of EEC-II EEC-III—EFI-control of engine timing and fuel (with EFI system).

EESS (EVAPORATIVE EMISSION SHED SYSTEM) — A system for containment of evaporative fuel vapors introduced in 1978. Annual improvements have modified this system.

EFI (ELECTRONIC FUEL INJECTION) — A system using two injectors, computer controlled, spraying fuel into a divided throttle body and thence to a dual plane intake manifold.

EFM — Refer to EFI.

EGC (EXHAUST GAS CHECK VALVE) — Allows thermactor air to enter exhaust manifold but prevents reverse flow in event of improper operation of other components.

EGO (EXHAUST GAS OXYGEN SENSOR) — Exhaust Gas Oxygen Sensor or its signal Line. Sensor changes its output voltage as exhaust gas oxygen content changes when compared to oxygen content of atmosphere. Constantly changing voltage signal is sent to the ECA and MCU for analysis and adjustment of the A/F ratio.

EGOR (EGO SIGNAL RETURN) — EGO signal return with separate ground on engine block.

EGR (EXHAUST GAS RECIRCULATION) — A procedure where a small amount of exhaust gas is readmitted to the combustion chamber to reduce peak combustion temperatures and thus reduce NOx emissions.

EGR-ACT — EGR Solenoid pressure valve assembly.

EGR COOLER ASSEMBLY — Heat exchanger using engine coolant to reduce exhaust gas temperature.

EGRC (EGR CONTROL SOLENOID) — Electrical solenoid or its control line. Solenoid switches engine manifold vacuum to operate EGR valve. Vacuum opens EGR valve when solenoid is energized.

EGRV (EGR VENT SOLENOID) — Electrical solenoid or its control line. Solenoid normally vents EGRC vacuum line. When EGRV is energized, EGRC can open EGR valve.

EGR VA (EGR VALVE ACTUATOR).

EPA (ENVIRONMENTAL PROTECTION AGENCY) — Federal agency having responsibility for administrating congressional programs relating to the protection of the environment.

ERTN — Refer to EGOR.

ESC (ELECTRONIC SPARK CONTROL SYSTEM) — An electronic distributor vacuum control system aiding in more complete combustion through controlled spark retard under certain temperature and speed conditions.

EVP (EXHAUST VALVE POSITION SENSOR) — Potentiometric Sensor or its signal line. Sensor wiper position is proportional to EGR Valve pintle position. This allows ECA to determine actual EGR flow at any point in time.

EXHAUST GAS ANALYZER — An instrument for determining the amount of HC and CO emitted to the atmosphere. These instruments usually incorporate a "wheatstone bridge" to analyze the thermal conductivity of the mixture. A means of determining the efficiency with which the engine is then burning fuel.

EXHAUST HEAT CONTROL VALVE — A valve which routes hot exhaust gases to the intake manifold heat riser during cold engine operation. The valve can be thermostatically-controlled, or vacuum-operated.

FBC — Feedback Carburetor System — A system of fuel control employing a computer controlled stepper motor that varies the carburetor fuel-air mixture.

GLOSSARY OF TERMS

EMISSIONS RELATED COMPONENTS

FBCA (FEEDBACK CARBURETOR ACTUATOR) — Controls carburetor air/fuel ratio. A system of fuel control employing a computer controlled stepper motor that varies the carburetor fuel-air mixture.

FDV (FUEL DECEL VALVE) — A valve which, during deceleration, adds additional air-fuel to the intake manifold to enrich the air-fuel mixture and thus provide for more complete combustion. See DVAC.

FP (FUEL PUMP RELAY) — Relay or its control line. Relay is controlled by ECA processor. Supplies power to electric fuel pump of EFI system.

FUEL-VACUUM SEPARATOR — Used to filter waxy hydrocarbons from carburetor ported vacuum to protect vacuum delay valve and distributor vacuum controls.

FULCRUM — The pivot point of a valve rocker arm on an engine.

GLOW PLUG — An electronically operated device used to heat up the combustion chamber in a diesel engine to aid in starting.

GND. (or) GROUND — Common line for all vehicle power, vehicle chassis ground and engine block ground, connected to vehicle battery negative terminal.

HC (HYDROCARBON) — Any compound composed of carbon and hydrogen, such as petroleum products. Excessive amounts in the atmosphere are considered undesirable contaminants and a major contributor to air pollution.

HCV (EXHAUST CONTROL VALVE).

HEADER — The portion of a diesel fuel injection pump which distributes fuel to the individual cylinders.

HIC (HOT IDLE COMPENSATOR) — A thermostatically controlled carburetor valve that opens whenever inlet air temperatures are high. Additional air is allowed to discharge below the throttle plates at engine idle. This feature improves idle stability and does not allow the rich fuel mixture normally associated with increased fuel vaporization of a hot engine.

IAT (INTAKE AIR TEMPERATURE SENSOR) — Refer to ACT.

IDLE LIMITER — A device to control minimum and maximum idle fuel richness of the carburetor. Aids in preventing unauthorized persons from making overly rich idle adjustments. The limiters are of two distinct types: the external plastic limiter caps installed on the head of idle mixture adjustment screws or the internal needle-type located in the idle channel.

IDLE VACUUM VALVE — This device may be used in conjunction with other vacuum controls to dump thermactor air during extended period of idle. Provides protection to the catalyst.

IGNITION PRESSURE SWITCH ASSEMBLY — Pressure switches used on turbocharged engines in conjunction with dual mode ignition to retard spark timing during boost to prevent engine damage.

IMS (IGNITION MODULE SIGNAL) — The signal produced by the ECA that controls the ignition module ON and OFF time and therefore the spark plug timing and coil dwell.

INERTIA SWITCH — EFI system switch. Designed to shut off electric fuel pump if vehicle receives severe rear end impact.

INJECTOR — EFI System Electrical Solenoid (one of two) or its control line. Solenoid, when energized, allows fuel flow into throttle body and thence into one plane of dual-plane intake manifold. Injector No. 1 (drivers side) — Pin No. 28. Injector No. 2 (passengers side) — Pin No. 12.

IPS (IGNITION PRESSURE SWITCH).

ITVS (IGNITION TIMING VACUUM SWITCH).

IVV (IDLE VACUUM VALVE).

LCV (LOAD CONTROL VALVE).

LEAKDOWN RATE — The period of time it takes for a valve tappet to collapse when being tested on a leakdown tester.

LINEAR — Similar to straight line. Directly proportional. Example: A linear circuit would produce 1X out with 1Y in 3X out with 2Y in a 9X out with 3Y in.

LOS (LIMITED OPERATIONAL STRATEGY) — Certain types of computer malfunction will place the ECA into the LOS mode. Output commands are cut off the important control solenoids.

MAP (MANIFOLD ABSOLUTE PRESSURE SENSOR) — An active circuit sensor (one-half of BMAP sensor) or its signal line. Sensor signal is proportional to the absolute pressure of intake manifold.

MCT (MANIFOLD CHARGE TEMPERATURE SENSOR) — Refer to ACT.

MCU (MICROPROCESSOR CONTROL UNIT) — Integral part of electronically controlled feedback carburetor system using TWC catalyst. Various sensors monitor mode conditions. MCU is now widely used on Ford-built vehicles for the control of air/fuel ratios.

GLOSSARY OF TERMS

EMISSIONS RELATED COMPONENTS

MCV (MANIFOLD CONTROL VALVE) — A thermostatically operated valve in the exhaust manifold for varying heat to intake manifold with engine temperature.

MONOLITHIC SUBSTRATE — The ceramic honeycomb structure used as a base to be coated with a metallic catalyst material for use in the converter.

NOx (NITROUS OXIDES) — A compound formed during the engine's combustion process when oxygen in the air combines with nitrogen in the air to form the nitrogen oxides which are agents in photochemical smog.

PASSIVE CIRCUIT — A circuit consisting of all passive elements. Resistors, capacitors, or inductors.

P.C.V. (POSITIVE CRANKCASE VENTILATION) — A valve which controls the flow of vapors from the crankcase into the engine intake system where they are burned in the engine cylinders rather than being discharged unburned into the air from the crankcase.

POSITIVE VALVE ROTATOR — A device at the base of the valve spring assembly used to rotate the valve slightly each time the valve is opened. This action prevents the buildup of carbon on the valve face and valve seat.

POTENTIOMETER — (POT), a variable registor with three connections. The third connection (wiper) moves physically up and down the resistive element which has each end attached to one of the other two connections.

POTENTIOMETRIC PROCESSOR OR — Like a potentiometer.

PPS (PORTED PRESSURE SWITCH).

PROCESSOR ASSEMBLY — Refer to ECA.

PTC (POSITIVE TEMPERATURE COEFFICIENT HEATER) — A temperature sensitive electric assist choke system activiated when ambient temperature is above 16°C (60°F.). Permits earlier opening of the choke plates to reduce fuel consumption.

PURGE CV (PURGE CONTROL VALVE).

PVS (PORTED VACUUM SWITCH) — A temperature-actuated switch that changes vacuum connections when the coolant temperature changes.

RATED RPM — The maximum RPM of a diesel engine run at wide open throttle.

RATIO — The proportion of value divided by another.

RATIOMETRIC — As used in EEC-A voltage divided by the VREF multiplied by 10.

RATIO-METRICALLY — Similar to a Ratio. Refer to Ratiometric for specific EEC meaning.

REED VALVE (Courier) — Check valve used on some engine applications. Prevents reverse flow of air from exhaust manifold to intake air cleaner.

RELAY — A switching device operated by a low-current circuit, which controls the opening and closing of another circuit of higher current capacity.

RELIEF VALVE — A pressure limiting valve located in the exhaust chamber of the air supply pump. Functions to relieve part of the exhaust air flow if the pressure exceeds a pre-determined value.

ROTARY INJECTION PUMP — A type of diesel injection pump which rotates and distributes fuel to the individual cylinders at precisely timed intervals.

SA-FV (SEPARATOR ASSEMBLY — FUEL VACUUM).

SC (SIGNAL CONDITIONER)

SDV (SPARK DELAY VALVE) — A valve which delays spark vacuum advance during rapid acceleration from idle or from speeds below 15 mph, and to cut off spark advance immediately on deceleration. Has internal sintered orifice to slow air in one direction, a check valve for free air flow in opposite direction and a filter.

SHED (SEALED HOUSING EVAPORATIVE DETERMINATION SYSTEM) — See EESS.

SILN (SILENCER-EXHAUST AIR SUPPLY).

SOLENOID — A wire coil with a movable core which changes position by means of electromagnetism when current flows through the coil.

SOL V (EGR SOLENOD VACUUM VALVE ASSEMBLY).

SPACER ENTRY EGR SYSTEM — Exhaust gases are routed directly from exhaust manifold through stainless steel tube to carburetor base.

SPK OR SPARK — Refer to IMS.

SRTN (SENSOR RETURN LINE) — A return line for all sensors, except EGO and CP.

SV-CBV (SOLENOID VALVE-CARBURETOR BOWL VENT).

SVV (SOLENOID VENT VALVE) — Energized by ignition switch to control fuel vapor flow to canister. Ignition off opens valve.

GLOSSARY OF TERMS

EMISSIONS RELATED COMPONENTS

TAB (THERMACTOR AIR BYPASS SOLENOID) — Electrical Solenoid or its control line. Solenoid switches engine manifold vacuum. Vacuum bypasses thermactor air to atmosphere.

TAD (THERMACTOR AIR DIVERTER SOLENOID) — Electrical Solenoid or its control line. Solenoid switches engine manifold vacuum. Vacuum switches thermactor air from downstream (past EGO sensor in exhaust system) to upstream (before EGO sensor) when solenoid is energized.

TAV (TEMPERATURE ACTUATED VACUUM)

TDC (TOP DEAD CENTER) — The point of rotation of the crankshaft when the piston is at the top of its stroke.

THERMACTOR — An air injection type of exhaust emission control system. Similar to exhaust emission control systems used by G.M. and American Motors vehicles. A product identification name of Ford Motor Company.

THERMACTOR II — This is a pulse air system which utilizes the natural exhaust pulses in a tuned pipe. A reed-type check valve responds to the negative pressure pulses so generated and permits air to be drawn into the exhaust system.

THERMISTOR — A resistor that changes its resistance with temperature.

TIMING — Relationship between Spark Plug firing and piston position, usually expressed in crankshaft degrees before or after Top Dead Center (TDC) of compression stroke. Example: 15 degrees BTDC.

TIV (THERMACTOR IDLE VACUUM VALVE) — Used in some evaporative emission systems to improve engine idling after a hot start.

TKA (THROTTLE KICKER ACTUATOR) — See TK or TKS.

TKS (THROTTLE KICKER SOLENOID) — Electrical Solenoid or its control line. Solenoid, when energized, supplies manifold vacuum to throttle kicker actuator as directed by the ECA. Actuator moves throttle linkage to increase idle rpm. TKS vents the actuator vacuum line when de-energized.

TP (THROTTLE POSITION SENSOR) — Potentiometric sensor or its signal line. Sensor wiper position is proportional to throttle position. Defines engine operation mode: closed, part or wide open throttle. (Replaces carburetor spark/EGR ports).

TRANSDUCER — An electrically actuated vacuum regulator.

TRS OR TRS + 1 (TRANSMISSION REGULATED SPARK CONTROL SYSTEM) — A distributor vacuum control system aiding in more complete fuel combustion by regulating spark retard when the outside air temperature is above 60°F. The system uses a switch responding to the gear range, or hydraulic pressure in the transmission, to regulate a vacuum control valve.

TSP (THROTTLE SOLENOID POSITIONER) — A device for providing variable throttle stops. A higher position for maintaining the specified idle rpm, and a lower position, when the ignition is turned OFF, to prevent dieseling. Can be used to increase throttle opening when air conditioning is turned on.

TSP-VOTM (TSP-VACUUM OPERATED THROTTLE MODULATOR).

TVS (THERMAL VACUUM SWITCH) — Used with some ported EGR systems. Located in the carburetor air cleaner to control vacuum to the EGR valve, instead of a PVS valve. Responds to temperature of the inlet air heated by the exhaust manifold.

TVV (THERMAL VENT VALVE) — Temperature sensitive valve assembly located in the canister vent line. Closes when engine is cold and opens when hot. Prevents fuel tank vapors from being vented through the carburetor fuel bowl when fuel tank heats up before engine compartment.

TWC (THREE WAY CATALYST) — Sometimes referred to as a dual catalytic converter. Combines two converters in one shell. Controls NOx, HC and CO.

VACUUM — A term used to describe a pressure that is less than atmospheric pressure; hence, a partial vacuum. Used for control purposes throughout the automotive industry.

VACUUM ADVANCE — Advances ignition timing with relation to engine load conditions. This is achieved by using engine intake manifold vacuum to operate the distributor diaphragm.

VACUUM REGULATOR — Provides constant vacuum output when vehicle is at idle from manifold. Switches to engine vacuum at off idle.

VACUUM REGULATOR/SOLENOID — Regulator valve provides vacuum to feedback carburetor. Solenoid is controlled by ECA to provide feedback carburetor control.

VACUUM RETARD DELAY VALVE — Delays the loss of vacuum signal during some vehicle deceleration modes.

VACVV-D (DISTRIBUTOR VACUUM AND VENT CONTROL VALVE).

GLOSSARY OF TERMS
EMISSIONS RELATED COMPONENTS

VACVV-T (THERMACTOR VACUUM AND VENT CONTROL VALVE).

VACW-D (VENT VALVE-VACUUM-DELAY) — Delays vacuum to the distributor through a sintered disk.

VBAT — Vehicle Battery, Battery Voltage, Pin No. 24, TSS A-1.

VCKV (VACUUM CONTROL CHECK VALVE).

VCS (VACUUM CONTROLLED SWITCH).

VCTS (VACUUM CONTROL TEMPERATURE SENSING VALVE) — A valve that connects manifold vacuum to the distributor advance mechanism under hot idle conditions.

VCV (VACUUM CHECK VALVE) — Used to retain vacuum signal in system after vacuum source is gone.

VCS-CT (VACUUM CONTROLLED SWITCH — COLD TEMPERATURE).

VCS-DI (VACUUM CONTROLLED SWITCH — DECEL IDLE).

VDV (VACUUM DIFFERENTIAL VALVE) — A valve used in the Thermactor system with catalyst to cutoff vacuum to the air bypass valve during deceleration.

VECI (VEHICLE EMISSION CONTROL INFORMATION DECAL) — Critical specifications for servicing emission systems. Decal located in engine compartment.

VEHICLE SPEED SWITCH (Courier) — Attached to speedometer to help control air fuel mixture at cruising speed.

VISCOSITY — The rating of an engine oil's resistance to flow.

VOTM (VACUUM OPERATED THROTTLE MODULATOR).

VRDV (VACUUM RETARD DELAY VALVE) — A valve which delays a decrease in vacuum at the distributor vacuum advance unit when the source vacuum decreases.

VREF (REFERENCE VOLTAGE) — A power supplied by ECA to some sensors regulated at a specific voltage between 8 and 10.

VRESER (VACUUM RESERVOIR).

VREST (VACUUM RESTRICTOR).

VR/S (VACUUM REGULATOR/SOLENOID).

VRV (VACUUM REGULATOR VALVE). — Three port valve.

VVA (VENTURI VACUUM AMPLIFIER) — Used with some EGR systems so that carburetor venturi vacuum can control EGR valve operation. Venturi vacuum is desirable because it is proportional to the air flow through the carburetor.

VVV (VACUUM VENT VALVE).

WIPER — Refer to potentiometer.

WOT (WIDE OPEN THROTTLE VALVE) — In some EGR applications, it is desirable to cutoff EGR flow at wide-open throttle, where a richer fuel mixture is needed for performance. Valve is vacuum actuated when "full throttle" signal is received from the carburetor.

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